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CIRCULATORY STASIS OF INTRAPERICARDIAL ORIGIN

THE CLINICAL AND SURGICAL ASPECTS OF THE PICK SYNDROME

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In referring to the various disorders of the pericardium, one is accustomed to use such terms as pericarditis with effusion, adhesive pericarditis, callous pericarditis, purulent pericarditis, hydropericardium, hemopericardium and pneumopericardium. These anatomic conditions, diversified as they are, have a common physiologic relationship. They produce two closely related clinical syndromes. These are the syndromes of acute and chronic intrapericardial pressure. It is our purpose to describe these clinical syndromes and recommend the adoption of this physiologic concept. We believe this would aid in the diagnosis of pericardial lesions in much the same way as the physiologic conception of intracranial disorders has aided in the diagnosis of intracranial lesions. The syndromes of acute and chronic intracranial pressure are well understood and their physiologic aspects have been of great importance in furnishing the guide to specific anatomic diagnoses. For example, a patient who is unconscious, with Cheyne-Stokes respiration, a high blood pressure, a slow pulse rate, and possibly choked disks, has acute intracranial pressure, while a patient who is ataxic, weak and drowsy, with choked disks, has chronic intracranial pressure. It requires further data to determine whether the first patient has an intracranial infection, tumor or hemorrhage, and whether the second patient has a space-occupying tumor, a block of the cerebrospinal fluid system, an infection or a slow hemorrhage. The correct lead to the diagnosis lies first in the recognition of the pressure syndrome. The diagnosis of pericardial lesions is frequently overlooked. If the syndromes of acute and chronic intrapericardial pressure were generally recognized, we believe that the specific anatomic diagnosis would be made more frequently.

THE SYNDROMES OF ACUTE AND OF CHRONIC INTRAPERICARDIAL PRESSURE

In order to understand the mechanism producing these clinical conditions, it is advisable to refer to certain pressure relationships that exist within the chest. Under normal conditions of respiration the pressure within the pleural cavity is always negative (by about 8 or 10 cm. of water). This negative pressure originates from the elastic recoil of the lungs. It is transmitted to all the intrathoracic viscera. The mediastinal space and the intrapericardial space, being bounded by soft, nonrigid walls, likewise carry a negative pressure. The pressure in the venae cavae and right auricle is negative by about 3 or 4 cm. of water. Under normal conditions the blood meets no obstruction at the point where the venae cavae pass through the pericardium. Under certain abnormal conditions the pressure on the heart and the short segments of venae cavae that lie within the pericardial cavity is increased. This mechanism can easily strangulate the circulation and can bring it to a partial or complete standstill. When the intrapericardial pressure increases suddenly, the circulation is immediately stopped and the blood collects in the venous reservoirs. In a few moments these reservoirs are filled and the pressure that is built up may become great enough to break through the pericardial barrier. In this event the circulation starts up again. The amount of blood entering the heart may be greatly cut down, but the vasomotor center is so efficient that, with only 50 per cent of the normal amount of blood entering the heart, the arterial pressure may show little if any reduction.[1] If the venous reservoirs cannot build up sufficient pressure to break through the pericardial barrier, the circulation comes to a complete standstill. In other words, it is incompatible with life for the pressure within the pericardium to exceed the pressure in the venae cavae.

The most common barrier is produced by fluid. The fluid may be an exudate or a transudate; it may be sterile or infected; it may be bloodstained or whole blood. The heart may be compressed also by a tight envelop of scar tissue or by a deposit of calcium; it may be pressed on by a neoplasm or by a collection of gas in the pericardial cavity. The gas may consist of air or it may be produced by gas-forming bacteria.

Acute intrapericardial pressure is usually caused by hemorrhage from wounds of the heart or coronary vessels, or from rupture of a weakened myocardium, or from an aneurysm. It is sometimes seen with a rapidly progressing suppurative infection. The clinical picture is exactly what one would expect from an acute strangulation of the heart. The veins are full of blood. Their walls have not been stretched by chronic pressure and they are not prominent, but the venous pressure is elevated by as much as 15 cm. of water. There has not been sufficient time for ascites, hydrothorax or edema to develop. On the arterial side of the circulation the vasomotor center is doing what it can to maintain an

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1. Beck, C. S., and Isaac, L. A.: Pneumocardiac Tamponade: A Study of Atmospheric Pressure, Negative Pressure and Positive Pressure upon the Heart, J. Thoracic Surg. 3:124 (Dec.) 1933.

adequate pressure.[2] As the arterial circulation fails, the body cools and the skin becomes moist, cold and pale. The patient at first may go through a period of excitement and anxiety but, as the brain becomes anemic, consciousness is lost. Examination of the precordium shows little. The cardiac sounds are faint and distant or may be inaudible. There is no pulsation of the precordium.

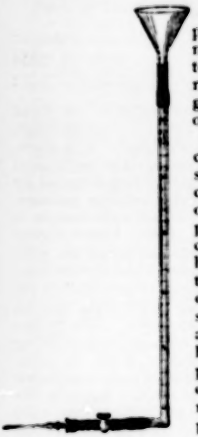

Fig. 1.—Venous pressure apparatus, used with a No. 18 needle. With the patient recumbent, his arm is placed on a level with the right auricle; the apparatus is filled with physiologic solution of sodium chloride, the needle is inserted into the vein and the fluid is allowed to run into the vein. The height of the fluid column, after being corrected for capillarity, is the venous pressure.

The area of cardiopericardial dulness shows little or no perceptible increase. It is unnecessary, and may be unwise, to spend the time taking a roentgenogram if urgent surgical treatment is to be carried out.

If the strangulation of the circulation takes place more slowly and does not become complete, the clinical picture of chronic intrapericardial pressure develops. In the chronic condition a considerably greater pressure can be tolerated than in the acute condition. A high venous pressure is built up as a protection and this pressure may be as high as 30 to 34 cm. of physiologic solution of sodium chloride; the veins dilate in response to the prolonged pressure and they sometimes stand out like goose quills. If the intrapericardial barrier is fluid, the pericardium dilates gradually and may contain as much as several liters of fluid. The liver and spleen enlarge. Ascites and hydrothorax develop. Subcutaneous edema may occur, but this is not marked and appears later. Cyanosis, weakness, and dyspnea on exertion are present. The arterial and pulse pressures are reduced. The systolic pressure may be about 90 to 100 mm. of mercury and the diastolic pressure about 70 to 80 mm. of mercury. Pulsus paradoxus is present. The minute volume output of the heart is reduced. The vital capacity is reduced. The response to exercise shows a delayed return of pulse and arterial pressures to former levels. The electrocardiogram shows low voltage and slurring of the QRS complex in all leads. The electrical axis may or may not show fixation with change in position of the patient. The results obtained from clinical examination of the precordium and from the roentgen examination depend on the pathologic process that is present. As already stated, this may be due to fluid or scar or to a combination of fluid and scar (fig. 2). If fluid is present, the precordial dulness is increased; the contour of the cardiopericardial shadow changes as the patient is moved from the erect to the recumbent position, and the amplitude of cardiac pulsation is reduced. If scar is present, the size of the cardiopericardial shadow may be approximately normal; it may be larger or smaller than normal; there may be fixation to the sternum; the pulsation may be reduced or absent and the venae cavae are distended. A pericardial paracentesis may yield additional evidence as to the presence of pericardial scar, calcification or fluid. If scar is present, the needle will encounter firm resistance when the pericardium is reached and, if inserted into the scar, will be dragged back and forth with each cardiac cycle. The scar may be so tough that it is impossible to penetrate it with the needle.

The clinical picture of chronic intrapericardial pressure was described by Friedel Pick[3] in 1896. He deserves credit for diverting attention from the liver to the pericardium as the primary seat of the trouble, but it is doubtful whether the continued use of the term "Pick's disease" is advisable in referring to this group of diversified conditions. It is more informative to refer to the mechanism producing the condition, as, for example, the syndrome of chronic intrapericardial pressure produced by scar tissue, of chronic intrapericardial pressure produced by a tuberculous effusion, of chronic intrapericardial pressure produced by a sterile effusion, or of acute intrapericardial pressure produced by a ruptured aneurysm.

This syndrome of chronic intrapericardial pressure is a type of circulatory failure that frequently can be cured by operation. It is important that this type of circulatory decompensation be diagnosed correctly so that operative treatment can be carried out in appropriate cases. Although its occurrence is rare when compared to that excessively large group of patients suffering from cardiac failure, nevertheless there are probably in this country several hundred cases of chronic intrapericardial pressure. The vast majority of these are not recognized and accordingly they are denied proper treatment. The operation for the relief of chronic pressure is a task with which the surgeon may be relatively unfamiliar. Few operators acquire experience in operating on the heart. Unlike any other organ in the body, the heart is in constant motion, and the surgeon must establish a new set of reflexes for this

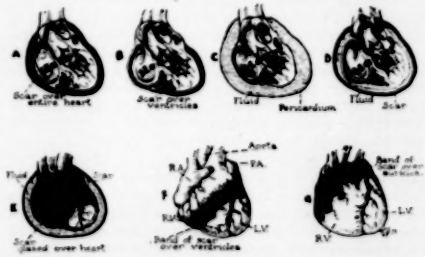

Fig. 2.—Various anatomic conditions that produce chronic intrapericardial pressure. Each of these conditions can produce the so-called Pick syndrome.

operation. This syndrome has been produced experimentally by the introduction of surgical solution of chlorinated soda into the pericardial cavity.[4] The labo-

2. By common usage the term blood pressure seems to mean arterial pressure. In the syndromes of intrapericardial pressure the venous pressure is of relatively greater importance than the arterial pressure. We prefer to make venous pressure determinations by the direct method (fig. 1).

3. Pick, Friedel: Ueber chronische, unter dem Bilde der Lebercirrhose verlaufende Pericarditis (pericarditische Pseudolebercirrhose) nebst Bemerkungen über die Zuckergussleber (Curschmann), Ztschr. f. klin. Med. **29**: 385, 1896.

4. Beck, C. S.: The Effect of Surgical Solution of Chlorinated Soda (Dakin's Solution) in the Pericardial Cavity, Arch. Surg. **18**: 1659 (April) 1929.

ratory offers an invaluable opportunity to acquire experience in performing this operation.

It is not our purpose in this paper to trace the successive steps that have been taken in the development of the surgical treatment and the results obtained.[5] Suffice it to say that patients who have been bedridden have been restored to active life, that in a few cases the circulatory relief has been complete and apparently permanent, and that in the future with improved methods and experience the operation undoubtedly will lose much of its hazard.

REPORT OF CASES

The following nine cases of chronic intrapericardial pressure are presented to show the similarity of the clinical pictures produced by dissimilar pathologic processes. Six of these patients were operated on.

CASE 1.—A boy, aged 13 years, complained of weakness, shortness of breath and pain in the upper part of the abdomen. These symptoms had been present for about one and one-half years; they had been insidious in onset and were becoming more marked. Several transient attacks of jaundice and epigastric pain without fever appeared during this period. There was no history of acute rheumatic fever, chorea or pneumonia. He had had frequent attacks of sore throat, and his tonsils had been removed eight years before.

The patient was bedridden, orthopneic, cyanotic and extremely weak. Ascites was marked. The liver and spleen were large and firm. Clinically there was no hydrothorax. Scrotal edema was present, but there was no other subcutaneous edema. Arterial pressure was 90 mm. of mercury systolic and 70 mm. of mercury diastolic. The pulse pressure was 20 mm. of mercury. The venous pressure was 35 cm. of physiologic solution of sodium chloride. The vital capacity was 1,500 cc. (calculated capacity 2,700 cc.). Pulsus paradoxus was present. Electrocardiograms showed low voltage and slurring of the QRS complex in all leads. The T waves were iso-electric in the first and second leads and inverted in the third lead. There was no shift of electrical axis with change of position. There were no cardiac murmurs. Fluoroscopic examination showed the amplitude of pulsation in each ventricle to be almost completely obliterated and the heart to be fixed in position.

Pericardiectomy was carried out, Nov. 21, 1929. The parietal pericardium and epicardium were everywhere adherent. These structures were transformed into a layer of scar tissue several millimeters in thickness (fig. 2 *A*). This scar was dissected from the heart. Under the microscope it showed only dense fibrous connective tissue without any evidence of tuberculosis or rheumatic infection. There was dramatic improvement in the circulation as soon as the heart was liberated.

The patient has led an active life since operation without showing the slightest evidence of circulatory failure. March 15, 1934, there was no ascites; the liver and spleen were not palpable; there was no hydrothorax and no scrotal edema; the arterial pressure was 120 mm. of mercury systolic and 70 mm. of mercury diastolic; the pulse pressure was 50 mm. of mercury; the venous pressure was 4 cm. of physiologic solution of sodium chloride; the vital capacity was 3,500 cc. (normal). Pulsus paradoxus was absent. The electrocardiogram showed slight slurring of the QRS complex in the first lead, none in the other leads and marked increase in voltage. The T wave was upright in the first lead and inverted in the second and third leads. There were no cardiac murmurs and the fluoroscopic examination showed normal pulsation in each of the cardiac chambers. Dr. David Steel said that under the fluoroscope "one would not suspect that the heart had ever been pathological." A cardiac output determination by means of the acetylene method[6] showed the following: pulse rate per minute, 72; oxygen consumption, 236 cc. per minute; arteriovenous oxygen difference, 57.3 cc. per liter; cardiac output per minute, 4.11 liters; cardiac index, 2.4; stroke output of heart, 57 cc. The result of this determination was in agreement with other determinations and showed the minute volume output and the stroke output of the heart to be normal. The operation was carried out four years ago, and the patient now shows no evidence of any circulatory abnormality, whereas before operation he was bedridden.

CASE 2.—A man, aged 30, referred by Dr. H. N. Kenwell of Buffalo, was admitted to the Buffalo City Hospital, April 1, 1931. Weakness and swelling of the abdomen had developed one month before admission. The examination showed a marked degree of ascites, slight edema of the scrotum, eyelids and ankles, marked engorgement of the veins, cyanosis and dyspnea. He had a troublesome cough, some pulmonary edema and hydrothorax. He had no fever. The arterial pressure was 110 mm. of mercury systolic and 90 mm. of mercury diastolic. The pulse rate ranged from 90 to 100 per minute. The venous pressure was 35 cm. of physiologic solution of sodium chloride. (This and subsequent determinations of the venous pressure on this patient were not corrected for capillarity. Glass tubing with a rather small bore was used and the readings may be as much as 4 cm. too high.) Pulsus paradoxus was present. The heart and pericardium were larger than normal and a change in the contour was determined by fluoroscopic examination when the patient was changed from the erect to the reclining position. This indicated fluid in the pericardial cavity. The cardiac sounds were faint; there were no murmurs. The margin of the liver was four fingerbreadths below the costal margin. Tubercle bacilli could not be found in the sputum, the ascitic fluid or the intrapleural fluid when injected into a guinea-pig. The electrocardiogram showed slurring of the QRS complex, notching of the P wave in lead I and inversion of the T wave in lead III.

He remained in the hospital continuously without showing any febrile response. The abdomen was tapped repeatedly. August 8, operation was carried out. An H-shaped incision was made over the precordium so that a bilateral exposure of the heart could be obtained. The third, fourth, fifth and sixth costal cartilages were removed on the left side. The parietal pericardium consisted of thick, tough scar tissue about 3 mm. in thickness. The pericardial cavity contained 200 cc. of bloody fluid. There were no intrapericardial adhesions. The heart, especially over the base, was covered by a layer of scar tissue measuring about 1 mm. in thickness; this scar disappeared over the apex. The parietal pericardium was excised as widely as possible. The fluid was removed and an attempt was made to excise the epicardial scar. This was difficult to do because it required sharp dissection, and repeatedly the dissection went into the myocardium. Four pieces were removed, each of which measured about 2 cm. in each direction. The areas from which the scar had been removed were connected by linear incisions, and the margin of the scar was undercut. After this was done the heart became larger and it was apparent that the restricting effect of the epicardial scar was reduced. The mechanism producing this clinical syndrome consisted of a thickened parietal pericardial scar that could not stretch, fluid in the pericardial cavity that pressed on the heart and venae cavae, and an epicardial scar that compressed the heart and limited the diastolic excursion (fig. 2 *E*). A drain was placed in the wound.

The circulation was definitely improved during and after operation. The cyanosis at times was completely absent. Arterial pressure was 100 mm. of mercury systolic, 70 mm. of mercury diastolic. The pulse pressure was increased. Pulsus

5. Delorme, Edmund: Sur un traitement chirurgical de la symphyse cardiopéricardique, Gaz. d. hôp. **71**: 1150, 1898. Volhard and Schmieden: Ueber Erkennung und Behandlung der Umklammerung des Herzens durch schielige Perikarditis, Klin. Wchnschr. **2**: 3 (Jan. 1) 1923. Schmieden, V.: Ueber die Exstirpation des Herzbeutels, Zentralbl. f. Chir. **51**: 46 (Jan. 12) 1924; Die Heilung der schrumpfenden Pericardial-Synechie durch Exstirpation des Herzbeutels, Acta chir. scandinav. **57**: 268, 1924; Neue Ergebnisse bei der Exstirpation des Herzbeutels, Arch. f. klin. Chir. **138**: 552, 1925; Technic of Cardiolysis, Surg., Gynec. & Obst. **43**: 89-93 (July) 1926. Schmieden, V., and Fischer, H.: Die Herzbeutelentzündung und ihre Folgezustände, Ergebn. d. Chir. u. Orthop. **19**: 98-216, 1926. Churchill, E. D.: Decortication of the Heart (Delorme) for Adhesive Pericarditis, Arch. Surg. **19**: 1457 (Dec.) 1929. Beck, C. S., and Griswold, R. A.: Pericardiectomy in the Treatment of the Pick Syndrome; Experimental and Clinical Observations, Arch. Surg. **21**: 1064-1111 (Dec. part 2) 1930.

6. We are indebted to Miss Alice B. Maltby for the cardiac output determination.

paradoxus disappeared. The venous pressure was recorded at 24 cm. of physiologic solution of sodium chloride, an abnormally high reading. Diuresis took place and for a time the patient felt stronger. The wound became infected, however, and drained large quantities of pus. The infection undoubtedly entered the mediastinum, although the patient showed only a slight febrile response and at times had no leukocytosis. The abdomen did not become distended with fluid at any time after operation and tapping was not necessary. He felt stronger and was up in a wheel chair. A letter from Dr. Kenwell, dated September 5, stated that ". . . the patient has lost considerable weight and is much weaker. His wound is open and draining thick purulent material; however, it is healing in nicely. His cyanosis is very slight. The ascites has not recurred. For the past seven days his temperature varied between 97 F. and 99 F., pulse rate from 80 to 130 per minute, respiratory rate 20 to 30 per minute. He is coughing more and expectorating small amounts at irregular intervals. Râles are heard over the left lung posteriorly and there is a question of consolidation here. The outlook does not look good. There is no fluid in the right chest. The venous pressure yesterday was 25 cm. of physiologic solution of sodium chloride, arterial pressure 92/70 mm. Hg." Dr. Kenwell's report, September 7, stated: "The patient died suddenly this morning. He became weaker gradually and just seemed to peter out. Just before death the pulse rate was 120, temperature 98.6 F. and respirations 24. I am not sure whether it was myocardial failure or whether suppurative mediastinitis was responsible. Unfortunately, an autopsy could not be obtained. We feel that the operative procedure did bring about an improvement in the circulation."

CASE 3.—A woman, aged 23, referred by Dr. Sterling Ruffin of Washington, D. C., and by the late Dr. W. S. Thayer of Baltimore, complained of swelling of the abdomen, fatigue and dyspnea on exertion. These symptoms began with an attack of pneumonia in February 1930, complicated by pericarditis with an effusion from which no organism could be obtained. Swelling of the abdomen was noted about ten months later, and in March 1931 a laparotomy was performed by Dr. A. L. Stavely of Washington, D. C., for the purpose of exploration and evacuation of fluid. No evidence of tuberculosis was found at operation. The ascitic fluid did not yield an organism. Subsequently the abdomen was tapped several times. The patient was able to get around, but her activities were somewhat restricted and she was troubled by the swelling of the abdomen. She was admitted to the Lakeside Hospital, November 18, with the typical signs of chronic intrapericardial pressure. The abdomen was distended, the liver was enlarged, the veins were dilated and distended, the venous pressure was 27 cm. of physiologic solution of sodium chloride, the lips and fingertips were cyanotic, the nutritional state was somewhat below normal, and there was no fever. The pulse rate was elevated; the blood pressure was low (98 mm. of mercury systolic and 78 mm. of mercury diastolic) and the pulse pressure was reduced. The heart was fixed in position; there was no shift of the electrical axis. There were no cardiac murmurs. The diastolic-systolic excursion of the heart was greatly reduced; indeed, it was practically absent. The heart was fixed to the sternum, and the hilar region showed increased density. Operation was carried out, November 25. An H-shaped incision was used. The third, fourth, fifth and sixth costal cartilages on the left were removed. The pleural sinus was adherent to the pericardium and could not be dissected from it. The heart was covered by a scarified structure that was originally the pericardium (fig. 2*A*). It measured almost 0.5 cm. in thickness. Movements of the heart were not transmitted through the scar. This scar was incised and dissected from the heart. After the heart was liberated, it dilated and seemed to fill better, and the circulation was improved. The heart appeared to be a small, shrunken organ, smaller than normal. The right auricle was intimately adherent to the scar, and removal of the fourth costal cartilage to the right of the sternum was necessary to give satisfactory exposure. When the scar was being dissected from the right auricle, an opening was made into the auricle. About 500 cc. or more of blood was lost before the opening was sutured. This was replaced by transfusion after the operation was finished. The anterior aspect of the pericardial scar was resected. The pleural sinus being adherent to the scar on each side prevented radical resection. The segment removed measured 6 cm. by 7 cm. and was 4 or 5 mm. in thickness. A small drain was placed in the lower angle of the incision.

The immediate response after operation was fairly good. The pulse rate was 112 per minute, but the blood pressure was only 64 mm. of mercury. The condition remained about the same, possibly slightly improved, during the first eight hours after operation. From then on a slight change for the worse was noted. Another transfusion was given. Respiratory movement began to show an effort and pneumothorax developed on the left side. Air was aspirated from the chest; the lung expanded partially, but there was no improvement and death occurred twenty hours after operation. Necropsy showed that the heart, right auricle and venae cavae had been completely freed from the encasement of scar. The pericardial scar showed only dense, hyalinized, fibrous tissue, containing only a few lymphocytes. There was no evidence of tuberculosis in the pericardial scar, but at the base of the heart, covered over by fibrous tissue, was a mass of tuberculous glands. The left lung was collapsed from pneumothorax. The liver weighed 1,500 Gm. and showed advanced perilobular fibrosis and severe passive congestion. There was no icy coating over the liver and spleen. Dr. Howard T. Karsner, in summarizing the examination, reported: "The anamnestic statement that the patient had pneumonia two years ago, together with presumptive exclusion of tuberculosis as a cause of the pericardial effusion by guinea-pig inoculation at that time, and the absence of morphological evidence of tuberculosis in the scar, would indicate that the pericardial scar was probably the result of an acute pericarditis which occurred at the time of the pneumonia. While it is true that the mediastinal fibrosis may have been related to the tuberculosis as a secondary manifestation, it might also have been the result of the pneumonia."

The factors producing death in this case were two: One was the nature of the pathologic process itself. The mediastinal and pericardial fibrosis were extensive and severe. The heart had become a small shrunken organ. Undoubtedly, its reserve was markedly reduced. The blood lost at the operation was probably not an important factor, because it was replaced by transfusions. The other and probably the most important factor was the pneumothorax, the collapse of lung, and the pneumocardiac tamponade. It is well known that a complete, unilateral pneumothorax seriously alters both the aeration of blood and the circulation through the pulmonary bed. It has also been demonstrated that a heart with a restricted amount of reserve may be unable to withstand simply the increment of atmospheric pressure such as occurs when it is exposed at operation.[7] The deleterious effects of atmospheric pressure could have been avoided if the operation had been carried out in a subatmospheric chamber. Since an operative chamber was not available at the time, we decided that for future work an improvised chamber should be applied to the chest over the wound after operation. By use of such a chamber a negative pressure can be applied to the mediastinum after operation, and air will be prevented from leaking into the mediastinum and pleura.

CASE 4.—A man, aged 41, a colored laborer, had been treated in 1925 for a gumma of the leg. Six years later the patient reappeared with the complaint of "stomach trouble" of two years' duration. This was characterized by epigastric pain occurring after meals. Associated with the pain he had an aching pain in the right side of the chest which was accentuated by activity and by lying on his side. The patient was weak. There was marked distention of the veins of the neck, enlargement of the heart, especially to the right of the sternum, and an irregular pulse. There was no Broadbent's sign and no pulsus paradoxus. The arterial pressure was 136 mm. of

7. Beck, C. S., and Cox, W. V.: The Effect of Pericardiostomy on the Mechanics of the Circulation, Arch. Surg. **21**: 1023-1039 (Dec., pt. 1) 1930.

mercury systolic and 80 mm. of mercury diastolic. There was no ascites and the liver was not palpable. Examination by x-rays showed an enlarged heart with very indefinite pulsation. A mass was found suggestive of an encapsulated pericardial effusion or an aneurysm, which displaced the heart backward and to the left. The pericardium showed definite deposits of calcium (fig. 3). There was a slight dextrocardiogram with occasional ventricular premature beats. The voltage was normal. The venous pressure was 22 cm. of physiologic solution of sodium chloride.

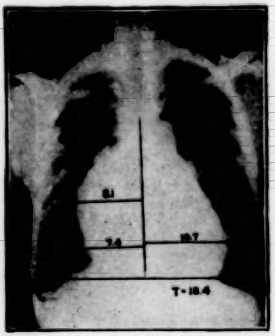

Fig. 3 (case 4).—Prominence in the region of the right auricle. Calcium deposits were seen in the lateral view.

The patient presented evidence of circulatory stasis due to pericardial calcification and possibly also an encapsulated effusion. It was a mechanical obstruction to the filling of the heart for the relief of which surgical treatment was indicated. The patient refused operation and could not be traced subsequently.

CASE 5.—A woman, aged 32, referred by Dr. W. M. Yater of Washington, D. C., with a diagnosis of "adherent pericardium with the Pick syndrome," had been told in 1919 that she had heart trouble and she was given no further information as to the diagnosis. In 1927 she first had pain over the precordium and the left shoulder. She felt weak and tired easily, although her work required very little physical exertion. Roentgen examination at that time showed an enlarged heart, and a diagnosis was made of pericarditis with effusion and rheumatic heart disease. During the following four years she had frequent attacks of weakness and dyspnea but was able with some difficulty to continue performing clerical work. In 1932 the patient first noted enlargement of the abdomen and a slight swelling of the ankles. A slight puffiness of the eyelids was frequently noted in the morning. The patient was examined by Dr. Yater and the diagnosis of adherent pericardium with Pick's syndrome was made. Because of the ascites an abdominal paracentesis was occasionally carried out, although the degree of ascites was controlled to some extent by salyrgan and a low fluid intake. The patient was admitted to the Lakeside Hospital, Jan. 16, 1933.

She was slightly cyanotic and undernourished. The jugular veins were distended. There was some puffiness of the face and slight edema of the ankles. The heart was enlarged, especially to the right of the midsternal line. Pulsus paradoxus was noted. The arterial pressure was 90 mm. of mercury systolic and 72 mm. of mercury diastolic. There was no hydrothorax. The liver edge was palpable 4 cm. below the costal margin after 7,000 cc. of fluid had been removed from the abdominal cavity. The venous pressure was 25 cm. of physiologic solution of sodium chloride. The vital capacity was 60 per cent of the expected normal. The exercise tolerance test showed the pulse and blood pressure returned to basal levels eight minutes after completion of the test. Cardiac output determinations by the acetylene method showed a minute volume output of 1.79 liters per minute. This represented a decrease of 42.3 per cent from the normal.

Electrocardiograms showed slight right axis deviation with slurring of the QRS complex in all leads. There was some change in axis with change in position. The voltage was very low. Roentgenologic studies showed the heart to be enlarged especially to the right. Pulsations were markedly diminished and the respiratory excursion of the heart was limited.

Pericardiectomy was performed, February 2. In several places the pericardium was adherent to the inferior aspect of the sternum. The pericardium was about 3 mm. thick and was firmly adherent to the heart (fig. 2*A*). The scar was separated by sharp dissection, and about 45 square centimeters was removed from the anterior and lateral surfaces of the heart. Histologic examination of the tissue showed chronic inflammation and hyalinization with no evidence of tuberculosis or rheumatic infection.

The patient showed marked symptomatic improvement following operation. There was little fluid in the peritoneal cavity when she was discharged from the hospital, April 10. The cyanosis and distention of the veins had disappeared. The venous pressure was 18 cm. of physiologic solution of sodium chloride. There was no puffiness of the face or edema of the extremities. A report from Dr. Yater, September 19, stated that in general she was much better than before operation. The face no longer appeared swollen and the veins in the neck were only slightly prominent. The abdomen showed slight evidence of fluid and measured 73 cm. in circumference (before operation it had been 86.5 cm.). The abdomen had not been tapped since operation.

CASE 6.—A woman, aged 54, referred by Dr. A. C. Ernstiene, had had dyspnea on exertion for nine months, orthopnea for four months, and swelling of the ankles for eight months. She had also observed that varicose veins in her legs were becoming larger and that veins in her right arm and over the upper part of the chest were becoming visible. There was a history of a severe pneumonia complicated by dropsy twenty years before. She was emaciated, cyanotic and slightly dyspneic. The jugular veins were distended, and over the upper portion of the anterior chest wall, especially on the right side, were many dilated and tortuous veins (fig. 4). There was no hydrothorax. The liver edge was about 3 cm. below the costal margin and there was no fluid in the peritoneal cavity. Roentgenologic examination showed markedly diminished cardiac pulsations. Calcification was present over the right and left ventricles and in the region of the right auricle. Electrocardiograms showed auricular flutter and slurring of the QRS complex in all leads and low voltage. The venous pressure was 21 cm. of physiologic solution of sodium chloride. The exercise tolerance test showed a delayed return. The cardiac output was 2.24 liters per minute, a reduction of 35.9 per cent from the normal. The vital capacity was 58 per cent of normal.

The patient presented evidence of circulatory stasis due to calcification of the pericardium. Operation was advised, but the patient refused to have it done.

CASE 7.—A housewife, aged 21, a Negress, complained of shortness of breath and swelling of the abdomen. Five months

Fig. 4 (case 6).—The veins of the chest and neck are dilated.

before admission she had had a normal delivery. One week post partum she developed pneumonia and since then she had had dyspnea, ascites, thoracic pain and edema of the lower extremities. Abdominal paracentesis was performed three times within a period of five weeks, and 11 liters of fluid was removed.

She was well developed, dyspneic and slightly cyanotic. The jugular veins were distended. The heart was enlarged to the right and left. The arterial pressure was 105 mm. of mercury systolic and 92 mm. of mercury diastolic. There was slight bilateral hydrothorax and marked ascites. The liver edge was

palpable 11 cm. below the costal margin. The spleen was not felt. There was no edema of the lower extremities. Roentgenologic examination showed an enlargement of the cardiac outline typical of pericardial effusion (fig. 5). The pulsations were practically absent. The lung fields showed shadows characteristic of pulmonary tuberculosis. There were also shadows due to calcification in the region of the cervical lymph glands. Electrocardiograms showed slight right axis deviation, low voltage and slurring of the QRS complex in all leads. The venous pressure was 25 cm. of physiologic solution of sodium chloride. The vital capacity was 50 per cent of normal. Cardiac output studies showed an output of 1.51 liters per minute. This was a decrease of 49.5 per cent of normal. Before fluid was aspirated from the pericardial cavity the intrapericardial pressure was 21 cm. of water, and following removal of 250 cc. of serosanguineous fluid the pressure fell to zero. Guinea-pigs were inoculated with this fluid but no evidence of tuberculosis was found. Abdominal paracentesis was also performed. Fluid reaccumulated rapidly in both abdominal and pericardial cavities. Sputum examination revealed tubercle bacilli. The patient presented evidence of circulatory stasis due to pericardial effusion (fig. 2*C*). The effusion was most probably of tuberculous origin, and operative intervention was contraindicated with the coexisting active pulmonary lesions.

CASE 8.—An intelligent man, aged 28, a teacher, referred by Dr. W. J. Leahy of Mannington, W. Va., had had ascites for eight years. He had had no illness preceding the onset of these symptoms. The abdominal swelling started insidiously and three exploratory laparotomies were performed. Ascitic fluid was injected into guinea-pigs and no evidence of tuberculosis was found. Except for nine months in 1929 the patient had had abdominal paracentesis every three weeks, and it was estimated that 780 liters of fluid had been removed. There was some weakness and dyspnea, but the patient occasionally played baseball and was able to complete, with honors, the work required for a college degree. A roentgenogram taken a year before admission to the Lakeside Hospital showed calcified deposits in the pericardium.

He was emaciated and slightly cyanotic and had a prominent abdomen. He weighed 170 pounds (77.1 Kg.). There was marked distention of the jugular veins, and dilated veins were visible over the upper portion of the anterior chest wall. There was fluid in the left pleural cavity. The heart was enlarged and displaced to the right. There was a marked pulsus paradoxus but no Broadbent sign. The arterial pressure was 96 mm. of mercury systolic and 74 mm. of mercury diastolic. The peritoneal cavity contained a large quantity of fluid, and the liver edge could be palpated 4 cm. below the costal margin. There was a hydrocele on the right side. Slight pitting edema was present in the lower extremities. The vital capacity was 52 per cent of the estimated normal. The venous pressure was 27 cm. of physiologic solution of sodium chloride. Cardiac output studies showed an output of 2.11 liters per minute. This was 50.4 per cent below normal.

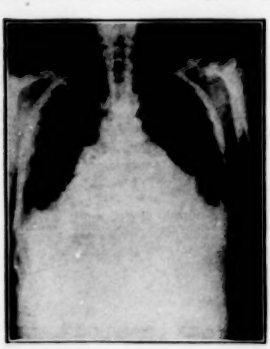

Fig. 5 (case 7).—Pericardial effusion. The patient had active pulmonary tuberculosis.

Fluoroscopic examination of the heart showed the pulsations to be barely visible. The heart was entirely encased in a capsule of calcium (fig. 6). There was fluid in the left pleural cavity. Electrocardiograms showed slight right axis deviation with slurring of the QRS complex in al. leads and very low voltage. The electrical axis was almost fixed.

Pericardiectomy was performed, July 31, 1933. The pericardium was calcified. The calcium deposits extended over both ventricles, anteriorly and posteriorly (fig. 2*A*) and surrounded the pulmonary artery like a ring. The pericardium was dissected from the anterior and lateral aspects of the heart. The calcium band about the pulmonary artery was removed with a rongeur. Histologic examination revealed densely fibrous and hyalinized connective tissue with many areas of calcium deposit. The heart dilated following the removal of the adherent pericardium and the arterial pressure was 115 mm. of mercury systolic and 78 mm. of mercury diastolic when the patient left the operating room.

Fig. 6 (case 8).—Calcification in pericardium.

He responded extremely well to the operative procedure, and three weeks after the first operation the hydrocele was repaired under local anesthesia. Cyanosis disappeared. The pulse pressure was increased. The arterial pressure became normal. The venous pressure fell to 12 cm. of physiologic solution of sodium chloride but several weeks later rose almost to the preoperative level. Marked diuresis took place and the patient was discharged from the hospital eight weeks after pericardiectomy.

A report that was sent by the patient, dated November 12, says: "I feel better than I have for years. It seems that I have more energy in the last few days than I ever have had. My heart seems to beat well and the pulse is much stronger. My weight is 158 pounds [71.7 Kg.]." As recently as April 1, 1934, the patient stated: "I feel excellent and have much energy. My color is better than it has been for ten years. The strength of the pulse is very much improved."

CASE 9.—A man, aged 24, referred by Dr. Roy W. Scott of Cleveland, with the diagnosis of pericardial scar, presented a typical picture of chronic intrapericardial pressure due to scar tissue compressing the heart. The etiology was obscure. Tuberculosis was suspected but was not proved. The patient had become a chronic invalid and accepted the possibility of cure by operation. The operation was carried out April 7, 1934. The heart was compressed by a thickened adherent pericardium. The pericardial scar was dissected from the heart and a wide resection was carried out. After the pericardial scar was incised and dissected free from the heart, the circulation was improved. The heart enlarged and the heart beat was more forceful. At the present moment, four days after operation, the patient is in good condition and the circulation shows improvement.

SUMMARY

1. The various anatomic disorders of the pericardium have a common physiologic relationship. Lesions of the pericardium produce the syndrome of either acute intrapericardial pressure or chronic intrapericardial pressure. We recommend the use of this conception of pericardial disorders.

2. The surgical aspects of chronic intrapericardial pressure have been presented. Operation was carried out in six of the nine cases reported.

AN IMPROVED TEST FOR OCCULT BLOOD, ESPECIALLY IN THE URINE

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Orthotolidine [1] was first proposed by E. B. Phelps [2] in 1909 as a qualitative test for minute amounts of free chlorine or hypochlorites in water. It is a crystalline basic body of the aromatic series obtained by reduction from orthonitrotoluene. It has a melting point of 129-130 centigrade and is quite insoluble in distilled water. It is quite soluble in acid solutions and in alcohol and ether. Ruttan and Hardisty [3] in 1912 described the use of orthotolidine as a test for the detection of blood. They used a 4 per cent solution in glacial acetic acid and added a small amount of perhydrol (Merck) as an oxidizing agent to obtain a blue color in the presence of blood. They stated that the solution would detect hemoglobin in a dilution of one part in 7,000,000 parts of water, in a dilution of one part in 24,000 parts of urine, in a dilution of one part in 100,000 parts of fecal material, and of one part in 30,000 parts of stomach contents.

In the course of a search for a new hemoglobin color standard, we have found orthotolidine useful in the detection of minute quantities of blood in urinary sediments. It is safe to say that the average laboratory urine report made by technicians rarely mentions the presence of red cells unless the presence of blood is grossly evident. Red blood cells in the sediment are often crenated or disintegrated in urine specimens a few hours old and are confused with leukocytes. The formed elements, including red cells, are frequently disintegrated in alkaline urine. The continued presence of red blood cells in urinary sediments has important clinical significance in that it may attract attention to glomerular inflammatory changes, which are frequently overlooked in the absence of albuminuria or other gross evidences of disturbance. Such observations have especial significance in latent stages of chronic hemorrhagic Bright's disease (glomerulonephritis). We have found frequently that red cells were excreted more or less constantly in patients with evident foci of infection. Such observations have important clinical implications of glomerular inflammation. The presence of a few red cells, leukocytes or casts, in the absence of other symptoms, may have little significance following unusual exercise or exertion.

Addis [4] examined a series of healthy students and found, by counting the red cells in the urine, that for twelve-hour night periods the number averaged 65,000 cells. The individual highest count obtained was 425,000 red cells for a twelve-hour period. This would mean, for an average twelve-hour night excretion of about 400 cc. of urine, that the number of red cells varied approximately between 150 and 1,000 per cubic centimeter. The persistent excretion of 1,000 red cells per cubic centimeter of urine, in our experience, would not be considered within the limits of normal variation and would point toward some source of chronic glomerular irritation. The important point is that such numbers are not recoverable easily by centrifugation, since disintegration or solution frequently has occurred.

Our experiments show apparently that from 50 to 80 per cent of red cells are recoverable. This point need not be considered as settled, since varying degrees of alkalinity and preservation of specimens, as well as the rate of centrifugation, may influence the result. We have considered that 50 per cent of the cells were recoverable as being a useful average in clinical work. The following experiment will illustrate the point:

To 15 cc. of normal, neutral or slightly acid urine, which had been filtered twice and which contained no microscopic evidence of blood, 75,000 red cells were added. The concentration then was 5,000 cells per cubic centimeter of urine. The 15 cc. quantity was centrifugated at 1,500 revolutions per minute for five minutes. The amount of sediment obtained was about 0.1 cc. or 100 c.mm., from which a count was made of the red cells. The count showed that the sediment contained 400 red cells per cubic millimeter. This would be equal to 40,000 red cells in approximately 0.1 cc. of sediment representing 15 cc. of urine. In other words, about 40,000 cells were recovered of the 75,000 cells originally present. Approximately, then, 50 per cent plus were recoverable by centrifugation at 1,500 revolutions per minute for five minutes. This may be expressed in formula as follows:

$$\frac{\text{Number of red cells per c.mm.} \times \text{millimeters of sediment} \times 2}{\text{Number of cc. of urine used}}$$

For example, 15 cc. of urine placed in a 15 cc. graduated centrifuge tube yielded 0.1 cc. of sediment with 400 red cells per cubic millimeter. The estimation would be as follows:

$$\frac{400 \times 100 \times 2}{15} \text{ or } 5{,}333 \text{ red cells per cubic centimeter of urine.}$$

The labor entailed in counting the red cells in urinary sediments restricts its usefulness in clinical work. We have found the following procedure useful:

1. Orthotolidine 1 per cent in chemically pure methyl alcohol. (It dissolves with slight difficulty and keeps at least ten months.)

2. Glacial acetic acid one part and commercial hydrogen peroxide two parts. (This keeps for three or four months, probably longer.)

3. Fifteen cc. of urine is centrifugated at about 1,500 revolutions per minute for five minutes. The supernatant fluid is poured off. A portion of the sediment is prepared for microscopic examination in the usual way. To the remaining sediment two drops of the orthotolidine solution is added plus two or three drops of the acid-peroxide solution. In the presence of blood cells aggregating 100 per cubic millimeter of sediment (approximately 1,350 per cubic centimeter of urine) a greenish blue color develops, lasting about one minute. In the presence of from 300 to 500 red cells per cubic millimeter of sediment (approximately 4,000 to 6,500 cells per cubic centimeter of urine) a deeper blue color develops lasting about one minute. In the presence of larger numbers of red cells, aggregating 1,000 per cubic millimeter of sediment (approximately 13,000 per cubic centimeter of urine) as in hemorrhagic Bright's disease (glomerulonephritis) a deep blue color develops lasting two minutes or longer.

Undiluted blood serum, 10 per cent sodium hydroxide, strong trisodium phosphate solutions and probably other strong alkalis will give positive reactions. Pus cells or any of the common organic or inorganic constituents found in the urine do not give positive reactions.[5]

1. Orthotolidine can be obtained from the Research Laboratory, Eastman Kodak Company, Rochester, N. Y., in quantities of 25 Gm. at a cost of 75 cents.

2. Phelps, E. B., quoted by Theriault, E. J.: The Orthotolidine Reagent for Free Chlorine in Water, Pub. Health Rep. **42**: 668 (Jan. 22) 1927.

3. Ruttan, R. F., and Hardisty, R. H. M.: Canad. M. A. J. **2**: 995, 1912.

4. Addis, Thomas, and Oliver, Jean: The Renal Lesion in Bright's Disease, New York, Paul B. Hoeber, Inc., 1931.

5. In two recently observed cases of chronic cyanosis, not of pulmonary or cardiac origin and without the presence of blood cells or hemoglobin in the urine, delayed atypical reactions occurred. In both of these patients the urine gave a greenish color with orthotolidine and the acid peroxide mixture, which developed slowly and did not fade for several hours. The significance of the reaction in chronic cyanosis is being studied further.

CONCLUSIONS

1. A 1 per cent solution of orthotolidine in chemically pure methyl alcohol and a mixture of one part of glacial acetic acid and two parts of commercial hydrogen peroxide are useful for an approximate quantitative determination of the number of red blood cells in the urine. These solutions are cheap and stable.

2. In a relatively large series of examinations of specimens of urine examined within six hours after voiding, no positive reaction has been obtained except when microscopic blood was present.

3. Specimens of urine containing as high as 5,000 red cells per cubic centimeter will in most instances be undetected by the usual microscopic examinations, since such numbers may represent only one or two cells per high power field.

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AMEBIC ABSCESS OF THE LIVER

REPORT OF CASES WITHOUT PREVIOUS MANIFESTATIONS OF AMEBIASIS

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The recent outbreak of amebic dysentery and the spread of infested persons throughout the country has awakened a lively interest in the disease and its sequelae. Diarrheas of every type are now viewed with suspicion. Many laboratories have been called on to do routine cultures of feces for amebas. It is of importance that attention be given to every person who has sojourned in known infested areas or has been exposed to possible carriers, even if that individual has not manifested any evidence of intestinal disturbance. Latent infections are well recognized by the profession and their danger to the host as well as the community is self evident. Craig [1] has pointed out that diarrhea may never occur during the course of the infection. Rogers [2] in several articles emphasized this fact.

For the past few months, sequelae of amebic dysentery of serious types and definite importance have been developing among individuals who are widely scattered throughout the country. These patients, while carrying a latent infection, have been insidiously developing secondary complications, chief among which is abscess of the liver. This condition is a common complication of recognized amebic dysentery. It is generally accepted that it follows in about 20 per cent of cases, yet it is rarely known to appear without the previous knowledge of a recognized focus or without preexisting intestinal symptoms. The time of appearance of the hepatic abscess after the primary infestation of the patient with amebas varies widely. In acute amebiasis, areas of toxic necrosis of the liver parenchyma are frequently encountered at autopsy, and definite abscess formation has been reported as early as three weeks after the onset of the disease. On the other hand, liver abscess in chronic amebic dysentery may not appear for years. Merklen, Waltz, Albot and Kabaker [3] recently discussed a case of chronic amebiasis in which recurrent attacks of hepatitis with icterus occurred over a period of eleven years and at operation a chronic thick-walled abscess was evacuated.

During the past six months there has been a marked increase in the incidence of abscess of the liver in Harper Hospital. Eight cases have been diagnosed and operation performed at this writing since Oct. 1, 1933. In the preceding five years only seventeen cases were recorded.

For comparison, attention is directed to a recent article by Gesner,[4] who analyzed 100 cases of liver abscess that came under observation in the New Orleans Charity Hospital from 1916 to 1932. Of these, fifty-seven were amebic abscesses, a finding that might be expected in that region. On the other hand, Collins,[5] in reviewing 18,300 autopsies in Minneapolis, reported only eleven cases in which liver abscess was the cause of death and stated that appendicitis and perihepatic inflammatory conditions were found to be the precursors of the abscesses.

Of the eight cases that have been studied, four were proved to be of amebic origin, two were characteristic of amebic liver abscess though the parasite was not found, and two were definitely not of amebic origin. Of the four proved cases, three failed to present any history of previous gastro-intestinal symptoms. Though each of these three cases could be traced to a definite source of contagion, it was impossible to elicit from the patient any history of symptoms of diarrhea, watery or bloody defecations, cramps or tenesmus. It seems of importance, therefore, that record be made of these three cases, which, following an indefinite latent period, have suddenly presented the symptoms and signs of liver abscess:

REPORT OF CASES

CASE 1.—F. P., a man, aged 45, white, a librarian, complained of a feeling of fatigue and lassitude, Feb. 2, 1934. His appetite became poor and pain developed in the upper right quadrant. This was described as a feeling of soreness, extending over the margin of the ribs and radiating to his right shoulder. Turning from side to side aggravated the pain. February 3 he had a chill lasting fifteen minutes, the temperature rising to 101 F. The following day he had two chills of shorter duration. The malaise increased and the distress became localized in the region of the ninth and tenth ribs on the right side. There was no nausea nor vomiting, nor were there any intestinal complaints. He was not jaundiced. On physical examination the abdomen was moderately distended; the margin of the liver extended two finger breadths below the costal margin; the lung liver dulness was in the fourth interspace. Sharp, direct percussion over the ribs elicited severe pain. The right thorax was somewhat hyperresonant. No râles were heard. The cardiovascular system was normal. The spleen was not palpable. The icteric index was 12. The van den Bergh test was slightly positive in the direct and positive in the indirect. The Wassermann reaction was negative. A flat plate revealed an enlarged liver with slight bulging of the convexity of the right leaf of the diaphragm. The costophrenic sinus was clear. The stools were negative for amebas and cysts. The blood count was: hemoglobin, 85 per cent; red blood cells, 4,480,000; white blood cells, 23,500; polymorphonuclears 85 per cent, of which 68 per cent were unsegmented and 17 per cent segmented. The urine was normal. Operation was performed by Dr. Brooks, who made a gallbladder incision and on examining the colon found marked cecal inflammation. The appendix was very long, edematous and red. The gallbladder showed moderate distention; no stones were palpated and there were no adhesions. The stomach, duodenum and remainder of the colon were apparently normal. The spleen was slightly

From the Department of Internal Medicine, Harper Hospital.

1. Craig, C. F.: Parasitic Amoeba in Man, Philadelphia, J. B. Lippincott Company, 1911, p. 263; Am. J. Trop. Med. **11**: 469-505, 1931.
2. Rogers, L.: Tropical Liver, Hepatitis and Abscess, Practitioner **131**: 117-133 (Aug.) 1933.
3. Merklen, P.; Waltz, R.; Albot, G., and Kabaker, J.: Amebic Hepatitis, Bull. et mém. Soc. méd. d. hôp. de Paris **48**: 1409-1413 (Nov. 14) 1932.
4. Gesner, H. B.: Abscess of the Liver, Am. J. Surg. **20**: 683-689 (June) 1933.
5. Collins, A. N.: Liver Abscess, Minnesota Med. **15**: 756-762 (Nov.) 1932.

enlarged, very firm, and surrounded by adhesions. The liver was about twice the normal size. The right lobe extended 3 inches below the umbilicus. In the right lobe well up toward the diaphragm, about 2 inches from the superior border, a softened area was found covered with thin exudate. Definite liver abscess was palpated. The appendix was removed. An aspirating needle was placed in the abscessed area and 15 cc. of thick, greenish red pus was removed. A stab drain was inserted just below the lower border of the last rib for drainage of the abscess. The cavity was opened and about 1 quart of pus escaped. The pus was immediately examined but no amebas were found. Culture revealed Staphylococcus aureus. Cultures did not reveal amebas. Pathologic examination of the appendix revealed active chronic inflammation of the appendiceal mucosa with many plasma cells and eosinophils. Amebas were found in the lumen and wall of the appendix.

Convalescence has been uneventful. Subsequently amebas were found in the stool.

CASE 2.—M. C., a woman, aged 19 years, white, a student, experienced a sudden, severe pain in the upper abdomen, localized in the epigastrium, Feb. 18, 1934. It was relieved by lying still but aggravated by movement. There was no nausea or vomiting. The pain subsided somewhat during the night so that on the following day she attended school; but she was forced to return home at noon to rest. During the next four days the pain remained stationary and she was about in her room. She did not consult a physician. February 28, the pain became more severe, radiating along the margin of the ribs on each side. The bowel movements were normal, formed, and occurred twice daily. The patient was admitted to the Harper Hospital, March 2, acutely ill. The temperature was 103, the pulse 120. At the time of examination she was lying on her right side suffering intensely from pain when she attempted to lie in a dorsal position. A well defined mass was felt high in the epigastrium, apparently connected with the liver. It was sharply circumscribed and exquisitely tender. The remainder of the abdomen was soft and pliable. The spleen was not felt. The lung liver dulness was not elevated. The lung fields and cardiovascular system were normal. Blood count revealed: hemoglobin, 77 per cent; red blood cells, 4,020,000; white blood cells, 27,400; polymorphonuclears, 88 per cent, of which the segmented were 61 per cent and the nonsegmented 27 per cent. The Wassermann reaction was negative. The icteric index was 4. The van den Bergh test was negative in direct and indirect. The urine was normal. A few fecal masses obtained with a colon tube were negative for amebas and for cysts.

Dr. MacAlpine made a midline incision from the ensiform cartilage to the umbilicus. The omentum was adherent to the anterior abdominal wall, just below the liver margin. When the adhesions were freed, the right lobe of the liver was exposed, enormously engorged, dark red and somewhat mottled. A fluctuating area appeared 3 cm. above the inferior border; 200 cc. of reddish lumpy, thick purulent material was evacuated.

Previous examination of the colon revealed no thickening, redness or edema. Drainage of the abscess was all that was attempted, because of the patient's condition. No amebas were found in the pus. Culture was negative. The patient convalesced rapidly. Following saline catharsis, March 14, motile amebas were found in the stool.

CASE 3.—A. A., a white man, an accountant, admitted to Harper Hospital, Oct. 14, 1933, suffered a sense of dull pain and discomfort in the upper right part of the abdomen while playing golf, September 27. He had a slight chill while taking a shower but later ate his dinner and was up and about all the evening, though he felt "miserable." At 4 a. m., September 28, he was awakened with a sharp, cramplike pain in the upper right quadrant which was relieved by an opiate. There was no nausea nor vomiting. There had been no increase of bowel movements or other abdominal distress. On that day his temperature reached 102. The pulse was 100. The pain continued off and on and was localized chiefly over the area of the lower ribs. Breathing aggravated the pain. Fixation of the right thorax with adhesive straps relieved the pain. The temperature slowly subsided and the soreness in the region gradually diminished. He was able to be about and finally on the twelfth day his family physician, thinking that the condition might be due to a cholecystitis, sent him for a gallbladder dye roentgenogram. Following this exertion and the taking of the dye, his symptoms suddenly became aggravated and his temperature rose to 101. He had no colicky pain, but the distress was more constant and prevented him from lying on either side. The pain shifted more to the axillary line and was higher than it had previously been. At this time he entered Harper Hospital. On examination there was evidence of a slight bulging in the liver region and marked tenderness over the costal margin. Through a rather thick abdomen could be felt an indefinable mass suggesting either an enlarged liver or an empyema of the gallbladder. There were no jaundice and no clay colored stools. A flat plate of the abdomen revealed a uniformly enlarged liver. The hemoglobin was 84 per cent, red blood cells 4,100,000, white blood cells 17,800 and polymorphonuclears 88 per cent, of which 32 per cent were nonsegmented and 56 per cent segmented. The Wassermann reaction was negative. The stools were negative for amebas and cysts. The urine was normal.

Operation was performed by Dr. Ballin, who made a median laparotomy incision from the xyphoid process down. The gallbladder was thin walled, grayish blue, and without stones. The appendix was edematous; it was not removed. The colon was thickened and edematous, such as is seen in mild colitis. There was no abscess formation and the colon did not resemble a dysenteric colon. Adhesions covered the surface of the liver, which, when separated, showed a thin wall covering a large abscess in the convexity of the liver. Reddish pus without odor was drained from a cavity about 5 cm. deep and admitting three fingers. A portion of the necrotic wall was removed. The pus did not show any amebas. A portion of the necrotic wall of the abscess was removed for pathologic examination, which revealed necrotic liver tissue, containing occasional amebas.

The patient made an uneventful convalescence.

COMMENT

The symptoms of liver abscess as exemplified in these three cases consist chiefly of sudden pain in the upper part of the abdomen and over the costal area adjacent to the liver. It may radiate upward and to the shoulder or along the costal margin. It is aggravated by body movement, especially when the patient attempts to turn from side to side. Breathing increases the pain. Nausea and vomiting are characteristically absent. Chills may occur, though they are not uniformly complained of or regular in their occurrence. A moderate degree of fever is present, usually of the continuous type. The pulse is rapid and soft. The leukocyte count is uniformly high. Schlayer [6] and Futcher [7] have pointed out that hyperleukocytosis is usually present. (The former considers it a valuable diagnostic sign. In eleven cases he reported an average of 25,000 before operation was performed.) Jaundice may or may not be present; if so, it is slight. Sharp percussion over the ribs may elicit acute pain. Bulging of the upper right side or a tumor mass may be visible and palpable. An x-ray film may reveal an enlarged liver and suggest the abscess.

These three patients give a definite history of having eaten in an infected area in September and October of 1933. In the first two cases the day of infection must have occurred in the first week of October. It is especially noteworthy that they suffered no intestinal symptoms whatever and manifested no signs or symptoms of liver abscess until February, an interval of at least four months following the date of exposure to the contagion.

6. Schlayer, G.: Hyperleukocytosis in Amebic Liver Abscess, München. med. Wchnschr., 1903.

7. Futcher, T. B.: Study of Cases of Amebic Dysentery Occurring in Johns Hopkins Hospital, J. A. M. A. 41:480-489 (Aug. 22) 1903.

The third patient might have become infected in July, August or September. As the date of onset was in September, the interval between the invasion and the beginning of his symptoms was of shorter duration. In each case the organism lay dormant in the intestine, exciting nothing more than a mild inflammatory reaction insufficient to produce symptoms. The invasion of the liver, as MacCallum * has pointed out, probably took place through the portal vein. The abscesses were thin walled in each instance. No multiple abscesses were found.

SUMMARY

Attention is directed to the recent increased incidence of liver abscess. It is especially noteworthy that amebic abscesses may occur in individuals who have manifested no previous signs or symptoms of intestinal disturbances. It is deserving of emphasis at this time that this important sequel of amebic dysentery may appear months and even years after the original contact with the source of the infection, that immediate operation is important, and that preventive treatment should be rigidly carried out in cases of latent amebiasis.

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TEMPORARY PHRENIC NERVE PARALYSIS

ITS ADVANTAGES OVER PERMANENT PARALYSIS IN THE TREATMENT OF PHTHISIS

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Surgical paralysis of the phrenic nerve has become so deservedly popular in the treatment of pulmonary tuberculosis that several thousands of such operations are now being performed in this country each year. Few physicians are aware that the function of the phrenic nerve may be stopped temporarily, for approximately six months, instead of permanently. During this time the clinical effect of the diaphragmatic paralysis may be tested and, if it is found to be unsatisfactory, the patient will again have the use of his diaphragm. If satisfactory, the paralysis may if necessary be made permanent or again be made temporary. Lack of this knowledge has caused widespread use of evulsion of the phrenic nerve or so-called phrenic exeresis or phrenicectomy, which produces an irrevocable paralysis of the diaphragm that has been shown by experience to be decidedly harmful to many patients.

The clinical results from phrenic paralysis are notoriously unpredictable. In some cases expected success is not realized, while in others healing of the lesions occurs when only improvement had been anticipated. Even when the disease is strictly confined to one lung, it is obviously undesirable that the patient should have a permanent paralysis of the diaphragm if this does not bring about the desired clinical effect. The importance of this is particularly evident in those many patients for whom a localized thoracoplasty of the upper ribs or an extrapleural pneumonolysis operation should later be used for cavernous lesions that the phrenic operation has failed to control.

When active tuberculous lesions are present in both lungs, the disadvantages of causing a permanent phrenic paralysis are still more apparent. If this operation brings about healing in one lung and if the disease in the opposite lung progresses and later requires a phrenic paralysis, pneumothorax, extrapleural pneumonolysis or thoracoplasty, the expected reduction in vital capacity from the combination of the bilateral operations and bilateral pulmonary infiltration and fibrosis may be so great that the indicated operation for the opposite lung cannot be performed. I have seen many tragic instances in which a permanent phrenic paralysis has prevented the performance of a life-saving operation for lesions in the opposite lung which, at the time that the phrenic operation had been performed months or years before, had a relatively innocent appearance. This is especially true of young persons.

In bilateral lesions, a unilateral temporary rather than a permanent paralysis safeguards the patient's future and affords the physician wide latitude in the choice of future treatment. Bilateral apical thoracoplasty or extrapleural pneumonolysis in the presence of a single permanent phrenic paralysis might not leave sufficient reserve respiratory function to be safe. If a staged bilateral phrenic paralysis should be indicated and if the patient's vital capacity after the first operation should permit the second, the paralysis should be a temporary one on both sides; when diaphragmatic motion returns, a permanent paralysis might be performed on the side of the more advanced lesions if they have been satisfactorily influenced. For patients who require a bilateral phrenic paralysis for intractable hiccup, the temporary effect is obviously desirable; a number of cases have been reported in which both halves of the diaphragm have been permanently paralyzed.

A complicated but not rare condition, involving the use of phrenic paralysis and pneumothorax in bilateral tuberculosis, is importantly affected by the type of phrenic paralysis used. When bilateral lesions are sufficiently severe to require the use of bilateral collapse therapy measures, a permanent phrenic paralysis is sometimes wrongly first used on one side (e. g., the right) and a pneumothorax planned for the left side. If pleural adhesions should prevent the induction of the pneumothorax on the left and if the phrenic paralysis fails to control the lesions on the right, a left phrenic paralysis and a right pneumothorax would be indicated. If the right pneumothorax should need to be a large one, it might happen that this, together with extensive bilateral pulmonary infiltration and fibrosis and a coincident bilateral phrenic paralysis, would too greatly reduce the patient's vital capacity to be practicable. Had the right phrenic paralysis been a temporary one, the desired plan of treatment could have been followed with relative safety after diaphragmatic movement had returned. The procedure that has just been outlined needs to be followed only if the patient should, mistakenly, have had a phrenic paralysis as the first collapse therapy measure. A far preferable plan in cases of bilateral severe lesions is first to attempt to produce a pneumothorax on the side of the more extensive lesions or the larger cavity and, if successful, use a temporary phrenic paralysis on the opposite side. If a pneumothorax cannot be induced, the phrenic paralysis should be used on this side and a pneumothorax attempted on the opposite side.

The examples that have been cited to illustrate the potential disadvantages of permanent phrenic paralysis are given with full realization of the fact that there are many patients with abundant respiratory reserve

8. MacCallum, W. G.: Text-Book of Pathology, Philadelphia, W. B. Saunders Company, 1924, p. 773.

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who do well under the various conditions that have been cited, in spite of a permanent phrenic paralysis. Not every primary phrenic operation should be a temporary one. If there are many lesions throughout only one lung and an attempted pneumothorax has failed, a permanent phrenic interruption is indicated, perhaps preliminary to a thoracoplasty. Another important indication for permanent phrenic paralysis is when a pneumothorax is being abandoned over a lung whose function has been largely destroyed by tuberculosis and fibrosis.

The availability of temporary phrenic nerve interruption has greatly extended the usefulness of diaphragmatic paralysis. Both patients and physicians are willing to undertake this revocable operation as a test of its effectiveness for lesions in which the chance of arrest is only reasonably good and in which they would hesitate to accept a permanent paralysis. Furthermore, it greatly extends the range of bilateral collapse therapy. Although 20 per cent or more of patients having had the temporary operation need to have a second operation to make the paralysis permanent or perhaps to repeat the temporary paralysis, this is a small inconvenience when compared with the disadvantages and dangers of a primary permanent paralysis, whose effect has not been tested for the particular patient. The percentage of primary temporary phrenic nerve operations has steadily increased in my clinic during the past five years and at present approximately 90 per cent of the initial operations are temporary.

In brief, the temporary operation should be used whenever there is reasonable doubt as to the result and especially when further unilateral or bilateral collapse therapy measures may be needed that might unduly reduce the vital capacity if the diaphragmatic paralysis remained permanent.

The chief objection that has been offered against the temporary operation is that the period of paralysis is highly variable and that usually it is too short to have the desired effect on the lesions. It is true that the duration of paralysis is uncertain when only the main trunk is dealt with and the accessory phrenic roots are neglected. When the complete operation is done, a paralysis of approximately six months' duration results; in rare instances the paralysis is permanent. The objection that temporary paralysis is insufficient in duration to control the lesions is not sound, in that a second operation may readily be used to paralyze the diaphragm permanently or temporarily, according to the effect of the initial operation.

The operation of temporary interruption of the phrenic nerve is but little more difficult than phrenic exeresis. The main phrenic trunk (sometimes double or triple) is thoroughly crushed with a hemostat in only one place; if the length of crushed nerve should be the width of several hemostats, the phrenic nerve axons might be unable to penetrate so broad a defect in the nerve. In the great majority of patients one, two or, rarely, more small nerves will be found emerging from the anterior or mesial surface of the fifth cervical root of the brachial plexus at or above the level of the upper border of the clavicle, and passing inferiorly and slightly mesially on the anterior surface of the scalenus anticus muscle. These nerves are accessory roots of the phrenic nerve, although one may be the nerve to the subclavius muscle, which often contains an accessory phrenic root. The accessory phrenic root or roots join the main phrenic stem in the superior mediastinum and if they are not crushed or resected they have a strong tendency gradually to assume sufficient independent function to motivate the diaphragm, even though the function of the main phrenic stem has been completely blocked.

It is preferable to resect small accessory phrenic roots for a distance of approximately 2 cm. rather than to crush them. They are too small to be needed for full resumption of diaphragmatic movement after the main phrenic nerve has regenerated. If they were merely crushed, it would be necessary to find them again if a second temporary operation were needed, and this would be difficult because of the presence of scar tissue that had formed in the field of the first operation (the large main phrenic trunk usually is not difficult to find).

If the second operation is performed to produce a permanent phrenic paralysis, resection of 3 cm. of the main phrenic trunk is all that is needed if the accessory roots were resected at the original operation. If the accessories had been crushed at the original operation, their function would be destroyed if not less than 10 or 12 cm. of the main trunk was evulsed, but evulsion or phrenic exeresis is a painful operation and reported cases of fatal mediastinal hemorrhage, mediastinal emphysema and torn pleura should serve as a warning against it.

Dr. John B. Barnwell of the Department of Medicine of the University of Michigan Hospital presented before the 1932 annual meeting of the American Association for Thoracic Surgery a number of the objections to permanent phrenic paralysis that have been considered in this article. He will later publish a detailed study of the subject. The present article is intended only as a preliminary presentation.

MALARIAL THERAPY IN SYPHILITIC INTERSTITIAL KERATITIS

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Interstitial keratitis, which is a fairly common manifestation of hereditary syphilis, presents a major therapeutic problem to both the ophthalmologist and the syphilologist. That the usual antisyphilitic treatment is inadequate is well known. Fisher,[1] in discussing the value of recent methods of treatment in the late stages of ocular syphilis, states that there is no evidence to show that treatment by either the older or the newer methods of antisyphilitic therapy is capable of arresting or even of modifying the progress of the disorder. Others, including Stokes,[2] Carvill and Derby[3] and Downing,[4] maintain that arsphenamine reduces the time required for a cure and tends to prevent recurrences. More recently, bismuth preparations, particularly the soluble salts, have been shown to possess a distinct advantage over mercurial therapy. Wright and Perl-

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1. Fisher, J. H.: Discussion on the Value of Recent Methods of Treatment in the Late Stages of Ocular Syphilis, Proc. Roy Soc. Med. **20**: 954 (Sect. of Ophthal. and Sect. of Neurol.) (April) 1927.
2. Stokes, J. H.: Modern Clinical Syphilology, Philadelphia, W. B. Saunders Company, 1926, p. 1004.
3. Carvill, M., and Derby, G. S.: Interstitial Keratitis, Boston M. & S. J. **193**: 403 (Aug. 27) 1925.
4. Downing, J. A.: Interstitial Keratitis, Treatment, Results and Case Reports, J. Iowa M. Soc. **15**: 60 (Feb.) 1925.

man [5] believe that the best treatment for interstitial keratitis consists in the conjoint use of neoarsphenamine and bismuth compounds. James [6] recently reported six cases of interstitial keratitis successfully treated by a comparatively new preparation known as Stovarsol, (acetarsone N. N. R.), but his results showed no great advantage over the better known methods.

From our own experience, it is believed that the therapeutic armamentarium against interstitial keratitis has been greatly increased by the aid of foreign protein therapy, especially intramuscular injections of milk or intravenous injections of typhoid vaccine. These observations concur with the opinions of Marchesani,[7] Huber,[8] Cowley [9] and others.

Granting that the newer forms of antisyphilitic therapy possess an advantage over the older methods, especially if augmented by nonspecific protein therapy, there are still many cases of interstitial keratitis that respond very slowly.

During the last six years, seventeen patients with syphilitic interstitial keratitis have been treated by malarial inoculation at the Lakeside Hospital and the Cleveland City Hospitals. These have shown such uniformly excellent results that a report of the cases is considered justified.

The literature on the subject is meager. Although several foreign workers have reported excellent results by the method, there is apparently only one report relative to the subject appearing in the American literature. Dennie, Gilkey and Pakula [10] in 1931 reported four cases of syphilitic interstitial keratitis treated by malaria, with rapid and excellent improvement in all four cases. They state that the improvement secured in from ten to twelve weeks was equal to the improvement secured in from six to nine months by other methods of treatment.

Schreiber,[11] one of the first to use malaria in the treatment of interstitial keratitis, in 1928 reported twenty-three cases treated by this method. He expressed the belief, after observing this series, that the course of the disease is greatly shortened and the iris more readily dilated but that the ground glass cornea is not changed. Marchesani [7] successfully employed malaria in the treatment of interstitial keratitis. However, owing to the danger associated with the treatment, he later substituted typhoid vaccine. Other foreign authors who noted favorable experiences with the use of malaria in interstitial keratitis include Albrich,[12] Granstrom [13] and Meller.[14] All reports reviewed have been highly encouraging with the possible exception of one by Kufs,[15] who saw a case of parenchymatous keratitis develop seven years after malaria therapy had been administered to a child with juvenile dementia paralytica.

5. Wright and Perlman, quoted by Cowley.[9]
6. James, W. M.: Stovarsol in the Treatment of Ocular Syphilis, J. Missouri M. A. **30:** 33 (Jan.) 1933.
7. Marchesani, O.: Beitrag zur unspezifischen oder Fiebertherapie der Keratitis parenchymatosa, Arch. f. Augenh. **99:** 207 (May) 1928.
8. Huber, R.: Klin. Monatsbl. f. Augenh. **75:** 252, 1925; cited by Clapp, C. A.: Interstitial Keratitis, Arch. Ophth. **2:** 580 (Nov.) 1929.
9. Cowley, R. H.: Some Observations on the Treatment of Interstitial Keratitis, Kentucky M. J. **30:** 423 (Aug.) 1932.
10. Dennie, C. C.; Gilkey, H. M., and Pakula, S. E.: The Antisyphilitic Action of the Malarial Parasite in Other Than Central Nervous System Syphilis, Am. J. Syph. **15:** 320 (July) 1931.
11. Schreiber, Z.: Ztschr. f. Augenh. **66:** 316, 1928; cited by Clapp.
12. Albrich, K.: Ueber den Einfluss von Infektionskrankheiten auf Augenleiden, Klin. Monatsbl. f. Augenh. **81:** 61 (July 27) 1928.
13. Granstrom, K. O.: Malariabehandlung vid Keratitis Parenchymatosa, Hygiea **93:** 830 (Nov. 15) 1930.
14. Meller, J.: Welchen Wert hat die Malariatherapie bei luetischen Augenerkrankungen? Aerzt. Praxis **5:** 173 (June 15) 1931.
15. Kufs, H.: Keratitis parenchymatosa sieben Jahre nach der Malariabehandlung einer juvenilen Paralyse, Arch. f. Psychiat. **93:** 552, 1931.

TECHNIC EMPLOYED

Before malarial inoculation each patient is given a complete physical examination, and routine laboratory procedures are performed; namely, complete blood examination, blood Wassermann test, urinanalysis and spinal fluid examination. As a rule, malarial therapy is not used in children under 11 years of age, because at this age the milder forms of fever therapy, such as typhoid vaccine, are usually quite successful. In our experience, young children tolerate malarial therapy poorly.

If no contraindication is found, from 5 to 10 cc. of blood withdrawn from a patient undergoing malaria at the time is injected immediately into the vein of the recipient. With the onset of fever the blood pressure is taken twice daily, and blood counts are performed twice a week. Arbitrarily, the patient's condition is considered serious if the systolic pressure remains below 90 between the paroxysms or if the red blood count falls below 2,000,000, or a sudden marked increase in the number of malarial parasites is found in the blood smears. In uncomplicated cases from eight to ten chills are given. In patients showing a poor tolerance to malarial inoculation, due to daily paroxysms or other complications, a small dose of quinine sulphate (from 3 to 5 grains, or 0.2 to 0.3 Gm.) often will stop the chills temporarily, affording a rest of a few days, thus permitting the course to be completed. The malaria is terminated by administering quinine sulphate (10 grains, or 0.6 Gm., three times a day for from five to seven days).

All patients are given a high caloric diet, and fluids are forced. Local therapy, consisting of 1 per cent atropine, boric acid flushes and warm compresses to the eyes, is used throughout hospitalization.

REPORT OF CASES

CASE 1.—J. D. L., a Negress, aged 11 years, admitted to the hospital, May 28, 1926, complained of a severe bilateral interstitial keratitis of five weeks' duration. Both eyes showed a marked cloudiness of the cornea, circumcorneal injection, photophobia and lacrimation. Only light perception was present in the right eye. The blood Wassermann reaction was four plus. During the first three weeks of hospitalization, the patient received five intravenous injections, each of 0.1 Gm. of arsphenamine, eight mercury rubs and three injections of typhoid vaccine, without any apparent improvement. She was then inoculated with malaria and had fourteen chills. The acute symptoms rapidly subsided, and when she was discharged from the hospital her eyes were remarkably improved. Follow up was unsuccessful and she was not seen again.

CASE 2.—N. B. A., a white girl, aged 14 years, was admitted to the hospital, July 28, 1926, with a diagnosis of congenital syphilis, juvenile dementia paralytica and interstitial keratitis. The eye trouble had begun one year before admission but had became much worse during the preceding two months. The child was poorly developed, both physically and mentally. Both eyes showed marked photophobia. She had Hutchinson's teeth and rhagades about the mouth. The blood and spinal fluid Wassermann reactions were both four plus. The spinal fluid showed a trace of globulin and a cell count of thirteen. Inoculated with malaria on the day of admission, she was permitted to have eight chills. The eyes cleared remarkably after the fifth and sixth chills and continued to improve until they were apparently normal, two months later. She was treated irregularly in the dispensary until Nov. 3, 1931, with no recurrences. The blood Wassermann reaction had become negative approximately two years after therapy was started. Permission for a repetition of the spinal fluid examination was refused.

CASE 3.—L. H. A., a white woman, aged 24, seen in the outpatient department in November 1923, had interstitial keratitis

of the left eye. Arsphenamine and mercury were administered and she showed gradual improvement over a period of six months. In spite of continued antisyphilitic therapy the right eye became involved two years later. Treatment was continued without improvement for another year and on Nov. 26, 1926, three years after the onset of her illness, she entered the hospital for malarial therapy. There was extreme photophobia and lacrimation of the right eye. The left eye showed slight haziness of the cornea; otherwise it was normal. The teeth were Hutchinson in type. The blood Wassermann reaction was four plus. The spinal fluid was negative in all respects. The patient was inoculated with malaria and permitted to have nine paroxysms. Local therapy was not administered. After the fourth malarial chill there was a decided improvement in the appearance of the involved eye. Pain, photophobia and lacrimation completely disappeared. At the end of the malarial course the patient could distinguish objects with the affected eye, whereas before only light perception was present. The patient continued antisyphilitic therapy in the dispensary. Six weeks later, almost full vision had been restored. The blood Wassermann reaction became negative six months later. There had been no recurrence when last observed, May 26, 1932. Both corneas were perfectly clear and the Wassermann and Kline reactions on the blood were negative.

CASE 4.—A. S. A., a white girl, aged 7 years, entered the hospital, March 26, 1927, with interstitial keratitis of two months' duration. Examination showed diffuse cloudiness of both corneas and severe photophobia. No other clinical evidence of congenital syphilis was present. The blood Wassermann reaction was four plus. The spinal fluid was normal. The patient was inoculated with malaria and had three chills. During the third chill she beame delirious and the temperature rose to 41.6 C. (106.9 F.). Because of her alarming condition, quinine and urea hydrochloride was given intramuscularly to terminate the malaria. In spite of her having had only three paroxysms, the eyes improved rapidly and she was discharged from the hospital two weeks later with both eyes apparently normal except for a slight haziness of the corneas. She was followed at regular intervals in the dispensary and received a total of fifty-one injections of arsphenamine, forty-two of a mercury compound and thirty-six of a bismuth compound, the last treatment being given, Jan. 9, 1932. The Wassermann reaction became negative one year after the malarial therapy. When last seen, July 12, there had been no recurrences, the vision was normal, and examination of the eyes showed no abnormality, except a small scar scarcely visible on the upper portion of the left cornea.

CASE 5.—J. B. A., a white man, aged 20, was admitted to the hospital, May 16, 1927. Three months prior to admission, the left eye became red and painful. The pain had gradually become worse and was accompanied by loss of vision of the affected eye. Examination showed a fine cloudiness over the whole of the left cornea and a dense infiltration of the upper segment. The right eye was clear except for a mild conjunctivitis. The Wassermann reaction was four plus. He was inoculated with malaria, and, after the sixth chill, it was terminated because of the extremely low blood pressure that developed. The eye improved rapidly and when the patient was discharged from the hospital, June 22, the photophobia and pain had disappeared and the vision was improved. The patient had never received any treatment previously, nor has he received any treatment since the malarial inoculation. He was not seen again until almost five years afterward (Jan. 3, 1933), at which time no residue of keratitis could be seen, and he stated that he had had no subsequent attacks in either eye.

CASE 6.—E. P., a white man, aged 21, had been treated three months with arsphenamine and mercury for interstitial keratitis, during which time his symptoms had increased. His eye trouble had begun about one year before. Examination showed Hutchinson's teeth and marked rhagades. The keratitis was so severe that he was able only to distinguish light from darkness. There were diffuse, bilateral corneal opacities and ciliary injection. The blood Wassermann reaction was four plus. The spinal fluid was normal. Malarial therapy was instituted, July 8, 1927, and a remarkable improvement was noted after the fourth chill. He was permitted to have four more chills, after which he stated that he could see better than at any time during the previous year. Two months after malarial therapy he had a mild flare up of interstitial keratitis, which subsided after two injections of sterile milk. He then received more or less regular antisyphilitic treatment until July 10, 1930, without further recurrences. When last seen, Jan. 3, 1933, the blood Wassermann reaction was negative and the eyes were normal.

CASE 7.—F. S., a white girl, aged 14, admitted to the hospital, Oct. 3, 1927, complained of painful eyes and reduced vision. The right eye had become involved eight months before; the left eye became similarly involved only one month before. Examination showed right eye: a nebuloid opacity of the cornea, circumcorneal injection, marked conjunctivitis, and only light perception; left eye: diffuse haziness over the cornea, moderate circumcorneal injection, and only light perception. She had Hutchinson's teeth and a high (Gothic arch) palate. The blood Wassermann reaction was four plus. Without having any preliminary antisyphilitic therapy, she was inoculated with malaria and had seven severe paroxysms. The eyes made rapid improvement, and she was discharged from the hospital, November 18, with but slight evidence of keratitis. Antisyphilitic therapy was then administered at weekly intervals for four years, and the eyes have remained clear. She was last observed July 12, 1932.

CASE 8.—A. B., a white man, aged 24, entered the hospital, June 1, 1928, complaining of sore eyes and loss of vision. He attributed his ailment to trauma of the left eye one week prior to admission. In the right eye there were numerous posterior synechiae and mild conjunctivitis. In the left eye there was a phlyctenule at the left side of the limbus, corneal vascularization, and only light perception. The blood Wassermann reaction was four plus. The spinal fluid examination was negative. The patient was inoculated with malaria and had fourteen chills. No improvement was noted until after the seventh chill. He then improved gradually until his discharge from the hospital, July 20, when he was practically well. One month later the eye trouble returned, both eyes showing a typical interstitial keratitis. The patient was again hospitalized and showed gradual improvement with typhoid vaccine injections and arsphenamine therapy. He was discharged, October 10. November 12 there was another mild recurrence, which again responded to typhoid vaccine. November 26, his eyes were clear and until last seen, Aug. 30, 1930, he remained well.

CASE 9.—J. B., a white man, aged 22, entered the hospital, July 19, 1930, complaining of pain in the left eye and pain in the knees. Both symptoms had begun three weeks before. He had severe photophobia of the left eye, with conjunctivitis and circumcorneal injection. The cornea was opaque. The right eye was normal. Both knees were swollen and tender, and the presence of fluid was demonstrated. The blood Wassermann reaction was four plus. A diagnosis of syphilitic hydrarthrosis of the knee joints (Clutton's joints) and syphilitic interstitial keratitis was made. Intensive antisyphilitic therapy, neoarsphenamine and bismuth compounds and shock therapy, typhoid vaccine, were administered. The knees rapidly improved, but the keratitis gradually became worse and on October 10, the right eye also became involved. Neoarsphenamine, bismuth and mercury compounds, potassium iodide, typhoid vaccine and milk injections were continued until November 26, four months after admission to the hospital, at which time no improvement was noted in either eye. Visual acuity at that time was reported in the right eye as only light perception, and in the left eye as 6/60. The patient was then inoculated with malaria, and after the fourth chill the improvement was so marked that the patient could see across the room with ease, whereas before he had barely more than light perception. He was given ten malarial chills and was discharged from the hospital one week later. The patient returned regularly to the dispensary, where he received continuous antisyphilitic therapy, alternate courses of arsphenamine and bismuth preparations, for eighteen months. Both eyes have remained clear, and when last seen, Nov. 8, 1932, only a few small corneal scars could be observed with an oblique light.

CASE 10.—R. F., a Negress, aged 26, entered the hospital Dec. 12, 1930, with a bilateral interstitial keratitis and iritis of five months' duration. There was extreme photophobia and only light perception present in the left eye. With the right eye she could count fingers only within a distance of 4 inches.

Both eyes showed a marked conjunctivitis and a diffuse cloudiness of the cornea. The Wassermann and Kline tests of the blood were strongly positive. She had received no antisyphilitic treatment. The patient was inoculated with malaria but failed to have any elevation of temperature by the ninth day. However, malaria parasites were demonstrated in the blood smears. She was then given one injection of a sterile milk antigen, which activated the malaria, and there was a regular course of twelve chills. After the fourth chill there was a definite improvement, and by the sixth all subjective symptoms had subsided. When she was discharged from the hospital, Jan. 11, 1931, both corneas were remarkably clear and she stated that her vision was as good as before the attack of interstitial keratitis. She was followed in the clinic at weekly intervals, where she received antisyphilitic therapy for twenty months. There was no recurrence and the vision has remained normal.

Case 11.—P. B., a Negress, aged 35, was first seen at the Charity Hospital dispensary, Jan. 14, 1931, with a marked interstitial keratitis of the left eye. There was no clinical evidence of congenital syphilis and no history of acquired syphilis. The blood Wassermann reaction was four plus. The spinal fluid was normal in all respects. She was given six injections of 0.4 Gm. each of arsphenamine without improvement. She was then admitted to the Cleveland City Hospital, February 26, for more intensive therapy. The left cornea was of a steamy appearance, with sharply defined areas of exudate deep within the corneal substance. The right eye was normal, except for a mild conjunctivitis. She was treated with six 0.2 Gm. doses of sodium bismuth thioglycollate and two typhoid vaccine chills, without improvement. She was then inoculated with malaria and allowed to have six paroxysms. There was an immediate response in the condition of the eye. She refused to take antisyphilitic treatment after her eye became well. When last seen, Jan. 3, 1933, she stated that she had had no further trouble with her eyes. There was a slight residual scarring of the upper and lower borders of the left cornea; otherwise the eyes were normal.

Case 12.—J. H., a white boy, aged 10 years, admitted to the hospital, April 23, 1931, complained of a bilateral interstitial keratitis of three weeks' duration. There was severe photophobia; both corneas were steamy to the point of opacity, with circumcorneal injection. The blood Wassermann reaction was four plus. No other clinical evidence of congenital syphilis was present. From April 23 to June 13, the patient received eleven injections of sodium bismuth thioglycollate, three injections of sterile milk and five intravenous injections of typhoid vaccine, without improvement. The patient was then inoculated with malaria, and after six severe paroxysms he showed remarkable improvement. While the corneas were still cloudy all signs of acuteness had disappeared. He visited the clinic regularly until December 5, during which time the cloudiness of the corneas gradually improved.

Case 13.—E. Z., a white woman, aged 21, entered the hospital, July 20, 1931, complaining that for one month the vision of the right eye had been blurred. There was a mild conjunctivitis of the right eye and a severe congestion of the blood vessels on the nasal side of the sclera. There was a dense opacity on the outer side of the cornea. The teeth were badly decayed and were suggestive of Hutchinson's type. There were rhagades about the mouth. The blood Wassermann and Kline reactions were four plus. An organic luetin test was strongly positive. The spinal fluid was normal. The patient was inoculated with malaria on the day of admission but remained afebrile for seven days. She was then given an intravenous injection of typhoid vaccine, which was followed by the beginning of the malarial chills. These continued regularly until quinine was administered, after the seventh chill. There was no change in the condition of the eye, until after the third chill, when a marked improvement was noted in the vision, and the subjective symptoms subsided. There had been no recurrence up to Nov. 6, 1932, fifteen months after malarial therapy. She received regular antisyphilitic treatment during this period of observation.

Case 14.—M. M., a white girl, aged 17, had received more or less continuous antisyphilitic therapy for congenital syphilis from various physicians and clinics since the age of 1 year. The blood Wassermann reaction was said to have become negative at the age of 9, but because of frequent trouble with her eyes treatment was continued. The last attack of interstitial keratitis began one and one-half years previously, and in spite of continuous therapy her eyes had become progressively worse. Feb. 18, 1932, she was referred to the Lakeside Hospital for malarial therapy. There was a marked blepharospasm, and both corneas presented the appearance of ground glass, with marked vascularization around the periphery. Only light perception was present in each eye. The blood Wassermann reaction was negative. The Kline test was three plus. The organic luetin test was strongly positive. No clinical evidence of congenital syphilis, other than the interstitial keratitis, could be demonstrated. Severe paroxysms started two days after malarial inoculation, and after the fifth chill the subjective symptoms abruptly ceased and the patient's vision had improved so greatly that she could recognize faces. The improvement continued steadily thereafter, and after the eleventh chill, when the malaria was terminated, she could read coarse print. When last observed, seven months after the malarial therapy, there had been no recurrence and her vision was apparently normal. The haziness of both corneas was barely perceptible.

Case 15.—G. H., a white woman, aged 21, entered the hospital, May 29, 1932, because of a typical interstitial keratitis in the left eye of two months' duration. The left eye showed circumcorneal injection and complete opacity of the cornea. The right eye was apparently normal. She had Hutchinson's teeth. The eye became much less painful following the first malarial chill, and she was discharged, very much improved, after ten chills. No preliminary treatment was given, and only one injection of arsphenamine followed malarial therapy. In response to the follow up she was seen, Jan. 3, 1933, when the vision of the left eye was apparently normal and only a small corneal scar remained. The right eye had not become affected.

Case 16.—M. W., a white girl, aged 19, entered the hospital, January 15, 1925, at which time a diagnosis of syphilitic periostitis of the tibia and of syphilitic interstitial keratitis was made. She was discharged without therapy, owing to lack of cooperation. Irregular treatment was administered, which cured the periostitis but did not affect the eye condition. Nov. 15, 1931, she was readmitted because of the severity of the interstitial keratitis, which had become progressively worse during the six years. Again she was discharged without therapy. She then received antisyphilitic treatment from her physician until July 21, 1932, without benefiting the eye condition. She was readmitted, July 21, seven years after the onset of her illness. There was an intense photophobia and lacrimation of both eyes, and only light perception was present. Both corneas showed a dense cloudiness and vascularization. Malarial inoculation was performed and the patient was permitted to have eight chills. After the second chill the acute symptoms improved. When discharged she was much improved, although still unable to read large print. Both eyes continued to improve, and when last seen, Jan. 3, 1933, she was able to read fine print without difficulty. No other treatment was administered after the malarial therapy.

Case 17.—T. M., a white girl, aged 15, entering the hospital, Oct. 13, 1932, complained that for the previous month she had suffered from a burning sensation and loss of vision in the left eye. She had received no antisyphilitic treatment. Examination showed the surface of the left cornea roughened. There were numerous irregular spots of infiltration over the central area in the deeper layers and a fine interstitial infiltration throughout the cornea. Only light perception was present. The right eye was normal. The blood Wassermann and Kline reactions were four plus. Other evidences of congenital syphilis were Hutchinson's teeth and a high arched palate. Following the fourth malarial chill the ocular condition began to improve. Eight chills were permitted, and there was a gradual improvement noted each day. After her discharge from the hospital she visited the clinic for treatment and when last seen, Jan. 3, 1933, she could read newspaper print with the affected eye. Only a small corneal scar could be seen. The right eye has remained uninvolved.

SUMMARY AND COMMENT

Seventeen patients with syphilitic interstitial keratitis, whose ages varied from 7 to 35 years, were treated by

means of malarial therapy, with uniformly good results. In every case the acute symptoms were relieved, usually early in the course of treatment. This rapid and complete cessation of pain, photophobia and lacrimation is emphasized as the most important finding of this study.

The final result in all cases was very good. Dennie and his co-workers,[10] in their article on the antisyphilitic action of the malarial parasite in other than syphilis of the central nervous system, state that in old cases of chronic interstitial keratitis in which connective tissue is present in the cornea, no benefit could be expected from the use of malaria. All their cases were of comparatively recent origin when malaria was administered. From the results obtained in our series, it is found that malaria therapy is most gratifying when used in somewhat chronic cases. Four of the cases were of over one year's duration, case 16 having presented interstitial keratitis for seven years. In none of the cases was there a residual impairment of vision sufficient to cause an industrial handicap. Malaria is not advocated in cases showing only residual scarring of the cornea, but in chronic cases that still present pain and photophobia it invariably causes these symptoms to cease. It is believed that the corneal opacities are more rapidly and completely absorbed than with any other type of therapy.

Recurrences were noted in only two cases; in each instance they occurred a few weeks after the malarial therapy and responded well to the usual antisyphilitic treatment.

Five patients each had only one eye involved when malarial therapy was administered; in none did the second eye become involved.

Ten patients received varying amounts of antisyphilitic treatment prior to the malaria and seven had received no treatment of any kind. There was apparently no difference in the response of the two groups.

There were no fatalities, and in only one case did alarming symptoms develop which necessitated the termination of the malaria early in the course. This occurred in a child aged 7 years (patient 4), in whom the malaria was stopped after the third paroxysm.

CONCLUSIONS

Malarial therapy is considered to possess a distinct advantage over any other known treatment for syphilitic interstitial keratitis, and if proper safeguards are observed the associated danger is reduced to a minimum.

Whenever possible, the patient with a resistant syphilitic interstitial keratitis should be given the benefit of malarial therapy in addition to the other usual forms of antisyphilitic treatment.

646 Metropolitan Building.

Beriberi.—Vitamin B_1 is the factor which is lacking in diets capable of causing the disease beriberi. Its richest sources are the germ of cereals and yeast, but it is widely distributed in a number of common foods, so that symptoms of frank deficiency are not found in those who partake of a mixed diet including such items as eggs, fresh meat, pulses and fresh vegetables and fruit. One of the earliest and most characteristic symptoms of deficiency of this vitamin is loss of appetite, and in experimental animals this is followed by disturbances in the functioning of the alimentary tract generally. This observation has led to the suggestion that partial deficiency of vitamin B is a common cause of constipation and other irregularities of intestinal function. The evidence for this view is conflicting.—Colwell, S. J.: Vitamins in Clinical Medicine, *Practitioner* **132**:15 (Jan.) 1934.

PYRETHRUM SENSITIZATION

ITS IMPORTANCE AND RELATION TO POLLEN ALLERGY

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It is quite generally accepted now that the wind-borne pollens are responsible for the seasonal symptoms of hay fever and asthma. Insect-pollinated plants cannot be blamed for the causation of allergic manifestation by ordinary exposure. For these reasons the numerous insect-pollinated plants and flowers, among which are the roses, chrysanthemums, goldenrod and fruit trees, have been absolved from blame. However, some of these insect-borne pollens are toxic and are capable of producing allergic symptoms if contact with the mucous membranes is assured. In this group may be mentioned particularly the goldenrod and pyrethrum families.

The pyrethrum flower is a member of the large order of Carduales, to which the ragweeds also belong. Very close contact with the ordinary garden species of pyrethrum has been known to cause allergic reactions among gardeners. However, the most important source of allergy to pyrethrum is exposure to insecticides made from the latter. For this purpose commercial "Pyrethrum" is made by drying the flowers of Chrysanthemum cinerariaefolium and Chrysanthemum coccineum. In this material is to be found, of course, the pyrethrum pollen. Many of the common household insecticides, such as Black Flag and Flit, contain pyrethrum.

Apparently commercial pyrethrum contains three toxic principles: One is the pyrethrum ester, which gives this material its insecticidal properties and may result in symptoms of poisoning if ingested. This substance is peculiar to some of the species of pyrethrum flowers. A second toxic fraction is that responsible for dermatitis,[1] which may occur in the pyrethrum industries or among those handling insecticides or the pyrethrum flowers. This irritant is probably an oleoresin and is found in many of the members of the Carduales. The third toxic fraction is the specific allergen, which may give rise to symptoms of allergy, particularly in the respiratory tract.

It is curious that the importance and significance of allergy to pyrethrum has not been clearly emphasized in the literature. There are isolated reports of pyrethrum sensitization. Garratt and Bigger[2] in 1923 reported the occurrence of asthma attacks in a young woman following the use of insect powder on her bed. She gave a marked positive cutaneous reaction to the insecticide. They think that the powder contained pyrethrum. Ramirez[3] in 1930 reported four instances of pyrethrum allergy. Although the protocols of his cases show definitely that in at least three there was clinical ragweed sensitization, he makes no reference to the possible significance of its relationship to pyrethrum sensitivity.

I have been impressed for a long time with the frequency of positive reactions to pyrethrum in ragweed sensitive patients. Possibly this has been evident because of the almost routine procedure I have practiced in performing complete skin tests with allergens

1. McCord, C. P.; Kilker, C. H., and Minster, Dorothy K.: Pyrethrum Dermatitis: A Record of the Occurrence of Occupational Dermatoses Among Workers in the Pyrethrum Industry, J. A. M. A. **77**:448 (Aug. 6) 1921. Sulzberger, M. B., and Weinberg, C. B.: Dermatitis Due to Insect Powder, ibid. **93**:111 (July 12) 1930.

2. Garratt, J. R., and Bigger, J. W.: Asthma Due to Insect Powder, Brit. M. J. **2**:764 (Oct. 27) 1923.

3. Ramirez, M. A.: Pyrethrum: An Etiologic Factor in Vasomotor Rhinitis and Asthma, J. Allergy **1**:149 (Jan.) 1930.

other than pollen in hay fever cases in the last few years. The advisability of the latter procedure is evident when statistics show that in 79 per cent of the hay fever cases additional reactions were obtained to other nonpollen materials (including pyrethrum).[4]

In a series of 225 patients sensitive to ragweed pollen, 104, or 46.2 per cent, gave cutaneous reactions with extracts of the commercial pyrethrum. In another series of 114 allergic cases, chiefly of asthma and hyperesthetic rhinitis, which were not sensitive to ragweed, a two plus reaction to pyrethrum was obtained in only one instance. In view of the fact that the pollen in commercial pyrethrum is diluted considerably with other portions of the flower, it might be expected that the pure pyrethrum pollen would give an even higher incidence of positive reactions in ragweed sensitive individuals. In a few of the ragweed sensitive patients who gave negative cutaneous tests with pyrethrum, intracutaneous tests gave positive reactions. This appears to indicate that the 46.2 per cent incidence of reactions could be enhanced if a more potent extract were used. Gelfand,[5] in tabulating the incidence of nonpollen tests in forty cases of hay fever, includes fourteen positive reactions to "insecticides" but does not discuss the nature of the insecticide, the method of testing or the significance of the reactions.

The foregoing considerations would make it appear that sensitiveness to pyrethrum is a group sensitiveness, occurs only in ragweed sensitive individuals, and is probably present in the majority of the latter. The following experiments substantiate further the fact that it is a group allergen or one closely related that is involved:

The serums of patients who gave good reactions to both ragweed pollen and pyrethrum extract were used to sensitize the skin locally in several nonallergic individuals. Subsequent testing of the sensitized sites with both ragweed pollen and pyrethrum gave positive reactions. This was, of course, controlled by obtaining negative tests on nonsensitized areas of the same individuals. The reactions to the ragweed pollen was obtainable with higher dilutions than those with pyrethrum, as may be expected by the source of extracts of the latter. Several of the sensitized sites were desensitized to pyrethrum by from one to three injections of the latter. These areas, when subsequently tested with ragweed concentrations that had given good reactions on nondesensitized sites, failed to show positive reactions. This indicates that desensitization to pyrethrum resulted in desensitization to ragweed pollen. In similar trials, sites desensitized to ragweed failed to react to pyrethrum. These experiments furnish additional evidence suggestive of a common or related allergen in ragweed pollen and pyrethrum.

Instances of allergic attacks from exposure to pyrethrum are too numerous to cite individually. I have observed attacks in many ragweed sensitive persons outside of the ragweed season. They have been due to bedbug powders, roach powders, fly sprays and even sprays used in keeping fleas from canaries. The point to be emphasized is that these are not unusual, rare or individual occurrences. The ragweed sensitive individual must be warned about these insecticides. It is possible that many of the unexplained attacks of hay fever or asthma occurring in winter in cases in which most of the symptoms are seasonal may be due to the common and general use of pyrethrum in the form of insecticides.

4. Feinberg, S. M.: Allergy in General Practice, Philadelphia, Lea & Febiger, 1934.

5. Gelfand, H. H.: The Determination of Factors to Explain Marginal Failure in Hay Fever Desensitization, J. Allergy 1:223 (March) 1930.

SUMMARY

From the evidence of completely tested patients and experiments in passive transfer of reagins it is evident that at least one half of ragweed sensitive individuals are sensitive to pyrethrum, which in varying forms has a tremendous consumption and widespread use in the preparation of insecticides. The allergenic substances of ragweed pollen and pyrethrum are closely related. The important, significant and practical fact to bear in mind is that a potential one or two million of ragweed sensitive people in this country are susceptible to allergic attacks at any time of the year, as the result of exposure to pyrethrum products. This source of allergy is deserving of special emphasis and consideration.

185 North Wabash Avenue.

THE LEUKOCYTE CONTENT OF THE BLOOD

FOLLOWING OBSTETRIC ANALGESIA PRODUCED BY PENTOBARBITAL SODIUM

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Pentobarbital sodium given orally has been proved an effective drug for producing analgesia during labor. It is generally considered that this drug has no observably deleterious effect on the infant and that the margin of safety for the mother with its use is great. It is possible to produce complete amnesia with massive doses of pentobarbital sodium, but satisfactory analgesia can be obtained among the great majority of patients by no more than 10 grains (0.65 Gm.) given during the course of the first stage of labor. As with any drug, the patient should be kept under close observation and the dose should be individualized to her needs.

There has been some discussion in the literature recently concerning the possible relation between the administration of barbiturates and the production of granulocytopenia. Madison and Squire [1] reported thirteen cases in which they thought granulocytopenia was probably due to the use of benzene chain derivatives. Watkins [2] recently discussed the possible part played by the barbiturates and amidopyrine in the causation of leukopenic states. As we have employed pentobarbital sodium in our obstetric practice among the majority of patients who were given analgesic agents other than a mixture of oxygen and nitrous oxide with the occasional addition of ethylene, we were naturally interested in the possibility that some deleterious effect on the leukocytes might be produced.

There are many reports in the literature based on studies of leukocytes during pregnancy, parturition and the puerperium. Moleschott [3] and Nasse in 1854 seem

From the Division of Obstetrics and Gynecology, the Mayo Clinic.

1. Madison, F. W., and Squire, T. L.: The Etiology of Primary Granulocytopenia (Agranulocytic Angina), J. A. M. A. 102:755-759 (March 10) 1934.

2. Watkins, C. H.: The Possible Rôle of Barbiturates and Amidopyrine in Causation of Leukopenic States, Proc. Staff Meet., Mayo Clin. 8:713-714 (Nov. 22) 1933.

3. Moleschott, J.: Über das Verhältniss der farblosen Blutzellen zu den farbigen in verschiedenen Zuständen des Menschen, Wien. med. Wchnschr. 4:113, 1854.

to have been the first to determine that there is leukocytosis during pregnancy. This has been confirmed by many investigators since, and there are numerous explanations for the condition. Virchow [4] considered leukocytosis during pregnancy to be physiologic, and he believed that it might be the result of an increase in the size of lymph nodes and lymph vessels about the uterus. Dietrich [5] has suggested that it is a reaction to the toxins of pregnancy.

It has been demonstrated that there is a definite increase in the number of leukocytes during labor. There is a shift to the left with a diminution in the number of lymphocytes, monocytes and eosinophils. There is also a considerable increase in leukocytes immediately after delivery, which reaches a peak, according to most observers, at the end of the first twenty-four hours. At this time there is a marked shift of the neutrophils to the left, by the Arneth count, and also in Schilling's hemogram. Fauvet [6] expressed the belief that leukocytosis in parturition is a "work leukocytosis." It is probable that a compensated acidosis exists during pregnancy and an uncompensated acidosis during parturition, and it has been shown that neutrophilic leukocytosis can be caused by acidosis. Experimentally, leukocytosis with a shift to the left can be demonstrated in acidosis caused by

TABLE 1.—*Dose of Pentobarbital Sodium Given During Labor*

Primigravidas	Dose		Multigravidas	Dose	
	Grains	Grams		Grains	Grams
2	1½	0.1	4	1½	0.1
3	3	0.2	5	3	0.2
8	4½	0.27	7	4½	0.27
1	4½	0.27	5	6	0.4 *
4	6	0.4	2	7½	0.48
1	6	0.4	3	9	0.6
3	7½	0.48	3	10½	0.68
1	7½	0.48	1	10½	0.68
3	9	0.6	1	12	0.77
1	9+	0.6+			
1	15	1.0			

administration of ammonium nitrate. Other drugs are known to affect the Arneth count. Ponder and Flint [7] have demonstrated that administration to rabbits of thyroid extract, thyroxine and other substances produces leukocytosis, with a shift of the Arneth count. Nye and Barrs [8] were unable to find any variation in the percentage of granular leukocytes after rabbits were strapped down for prolonged periods or after the use of amytal as an anesthetic agent. Given [9] was unable to detect any change in the number of leukocytes following administration of chloroform during labor.

In an attempt to determine whether there was a deleterious effect on leukocytes after the doses of pentobarbital sodium which we commonly employ for obstetric analgesia, studies were carried out on a group of fifty-nine parturient women. Twenty-eight of these were primigravidas and thirty-one were multigravidas. An additional ten patients who were given no analgesic agent other than mixtures of nitrous oxide and oxygen with occasional addition of ethylene were studied as a control group. The counts in the control group were all within limits that are accepted as normal for uncomplicated labor and puerperium and will not be referred to again. The number of leukocytes was counted, and

TABLE 2.—*Average Number of Leukocytes per Cubic Millimeter of Blood of the Fifty-Nine Parturient Women Concerned in Table 1*

During Labor		Post Partum	
Primiparas	Multiparas	Hours	Days
12,550	11,365	..	..
20,342	15,793	5	..
17,584	13,592	10	..
14,080	10,913	..	1
12,857	10,360	..	2
11,632	10,792	..	3
10,733	9,258	..	4
10,571	9,319	..	5
10,710	9,709	..	6
10,291	9,402	..	7
11,063	9,703	..	8
10,366	9,182	..	9

a differential count performed during labor, before administration of pentobarbital sodium. These counts were repeated five hours post partum, ten hours post partum, and daily thereafter between 9:30 and 11 a. m. for ten days. In addition to pentobarbital sodium, which was given in doses (table 1) of from 1½ to 15 grains (0.1 to 1.0 Gm.), a mixture of nitrous oxide, oxygen and ethylene was administered during the last part of the second stage; colonic oil-ether was administered to four primigravidas and one multigravida during the first stage of labor.

As other observers have found, there is a difference in the number of leukocytes of primiparas and of multiparas. The average number of leukocytes per cubic millimeter of blood for primiparas during labor was 12,550 and for multiparas (women in the second to the tenth pregnancy) 11,365 (table 2). The greatest leukocytosis was found five hours post partum; the

TABLE 3.—*Average Percentages of Different Leukocytes in Blood of the Fifty-Nine Parturient Women Concerned in Table 1*

Time with Relationship to Labor	Lymphocytes*		Monocytes		Neutrophils†	
	Primiparas	Multiparas	Primiparas	Multiparas	Primiparas	Multiparas
During labor	17.1	19.7	2.3	4.6	80.4	74.0
5 hours post partum	14.0	11.8	1.5	5.1	84.1	82.3
10 hours post partum	13.9	12.2	3.4	4.7	80.7	81.4
1 day post partum	16.4	16.2	2.8	5.1	77.3	80.1
2 days post partum	13.6	17.5	5.7	2.9	76.5	78.6
3 days post partum	17.5	20.6	2.1	3.2	78.7	75.2
4 days post partum	20.1	21.7	5.3	5.1	73.1	73.5
5 days post partum	20.9	21.5	5.9	4.2	71.7	72.3
6 days post partum	21.8	23.1	5.2	2.9	67.5	73.4
7 days post partum	23.2	26.5	1.7	2.5	70.2	67.4
8 days post partum	24.1	27.8	4.9	4.3	68.4	66.6
9 days post partum	22.5	28.2	4.1	3.7	69.8	65.7

* Lymphocytes in thousands.
† Neutrophils in percentages.

average number of leukocytes per cubic millimeter of blood reached 20,342 for primiparas and 15,793 for multiparas. The averages ten hours after labor were 17,584 and 13,592, respectively. The average for each group gradually diminished until the fourth day post partum and was 10,733 and 9,319, respectively. From then until the ninth day the average remained constant; averages on the ninth day were 10,366 for primiparas and 9,182 for multiparas. The majority of observers have reported a more gradual tapering of the averages.

4. Virchow, R. L. K.: Die Cellularpathologie in ihrer Begründung auf physiologische und pathologische Gewebelehre, Berlin, A. Hirschwald, 1871.

5. Dietrich, H. A.: Studien über Blutveränderungen bei Schwangeren, Gebarenden und Wöchnerinnen, Arch. f. Gynäk. **94**: 383-401, 1911.

6. Fauvet, E.: Beitrag zur Kenntnis der Schwangerschafts- und Geburtsleukozytose, Monatschr. f. Geburtsh. u. Gynäk. **90**: 220-228 (Jan.) 1932.

7. Ponder, Eric, and Flint, K. N.: Studies on the Arneth Count: VI. The Effect of Various Drugs and Extracts, Quart. J. Exper. Physiol. **16**: 393-398, 1927.

8. Nye, R. N., and Barrs, Vida R.: Effect of Prolonged Strapping Down and of Amytal on the Distribution of Granular Leukocytes in Rabbits, Folia haematol. **47**: 410-415 (July) 1932.

9. Given, J. C. M.: Hematology of Pregnancy and the Puerperium, J. Obst. & Gynec. Brit. Emp. **9**: 261-267 (April) 1906.

Studies of differential counts corroborate the numbers reported in the literature. The neutrophils reach their peak five hours post partum among both primiparas and multiparas and gradually diminish to normal proportions after five days among primiparas and four days among multiparas (table 3). As the percentage of neutrophils increased, the percentage of lymphocytes decreased. The percentage of monocytes varied little. The percentage of eosinophils and basophils was not noticeably altered. According to the Arneth count and the Schilling hemogram, the neutrophils shifted to the left.

The temperature of two patients was elevated during the postpartum period. One of these patients had a temperature of 101 F. on the seventh day and the other a temperature of 100.6 F. on the third day. In neither case was the leukocyte count above the average for the rest of the group of fifty-nine patients.

SUMMARY AND CONCLUSIONS

There has been nothing in the behavior of the mother or infant in any case in which pentobarbital sodium was administered to indicate any deleterious effect. Studies of the blood from this group of patients give no evidence of the production of a leukopenic condition with the amounts of pentobarbital sodium administered.

This series of studies of leukocyte and differential counts indicates that the greatest leukocytosis occurs at the fifth hour post partum. The level of leukocytes falls steadily to the fourth day, when the number of leukocytes per cubic millimeter of blood remains constant until the last examination on the tenth day.

THERAPEUTIC PNEUMOCOCCUS TYPE VIII (COOPER) SERUM

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Pneumococcus type VIII (Cooper) is identical with the Thomas strain (closely related immunologically to pneumococcus type III) described by Sugg, Gaspari, Fleming and Neill,[1] and the strain classified as pneumococcus IV A by Johnson of Pittsburgh, which was common in Pittsburgh in 1927. Georgia Cooper[2] published her description of pneumococcus type VIII in March 1929.

Pneumococcus type VIII is culturally distinct from pneumococcus type III, and the course of the pneumonias it causes is different from that induced by pneumococcus type III. Differentiation between type III and type VIII is readily made by the "swelling" reaction of Neufeld, specific rabbit serum being used for type III and type VIII, and by the colonies. The type III colonies are large and mucoid; the type VIII colonies are smaller, with more surrounding hemolysis.

Until July 1, 1933, my associates and I observed at Harlem Hospital 133 cases of pneumococcic pneumonia due to pneumococcus type VIII, in 122 adults and 11 children.[3] Thirty-seven adult cases were treated with serum; twenty-seven were nonbacteremic and none of the patients died. Among eighty-five cases not treated with serum, seventy patients were nonbacteremic and nine died, a mortality of 12.8 per cent.

A factor determining the outcome in pneumococcus pneumonia is invasion of the blood stream. Apparently the amount of invasion is significant. Invasion with a few organisms, as revealed by growth in the broth with none or only a few organisms on the agar plates, is apparently of less significance. In several instances the organisms grew in chains. In one fatal nonserum case, chain formation present at first, was absent in later blood cultures.

Type VIII Pneumococcus Pneumonia in 122 Adults, 1928 to 1933

Treated with Serum			Not Treated with Serum		
Cases	Deaths	Percentage	Cases	Deaths	Percentage
37	2	5.4	85	14	16.4
10*	2*	20.0*	15*	5*†	33.3*

* Asterisk indicates positive blood culture cases.
† Two cases with colonies in postmortem blood excluded.

Of the bacteremic cases, ten were treated with serum and two patients died, a mortality of 20 per cent; fifteen were treated without serum and five patients died, a mortality of 33⅓ per cent.

In our nonserum cases, three patients died of the seven in whom a single colony occurred on agar or only the broth was positive. Two cases in which the organisms (in broth only) were recovered for the first time in postmortem blood from the heart were counted as nonbacteremic. In the serum series, none of the five cases of slight invasion resulted fatally. Possibly the serum prevented severer invasion of the blood stream.

Among the more heavily invaded group that received no serum, there were eight cases and five deaths; in one of these cases, meningitis due to pneumococcus type VIII supervened three months after the pneumonia, which had been complicated with empyema.

In the serum group, two of the four patients died. One had meningitis as well as pneumonia on admission; the other showed a marked reduction of the bacteremia after the serum, but the treatment was discontinued because the stock of serum was exhausted.

The cases were accepted for treatment alternately in order of admission. There was no attempt to select early or favorable cases. Twenty-seven per cent of the serum cases were bacteremic; only twenty per cent of the nonserum cases were bacteremic.

The usual duration of the cases not treated with serum was from eight to nine days; most of the cases treated with serum terminated by the sixth day.

Twenty-nine cases treated with serum and thirty-six cases not treated with serum were studied for the presence of agglutination by the Sabin slide agglutination technic. The agglutinins were present much earlier in the serum cases than in the controls. The agglutinations were found as early as the third day in three cases treated with serum and on the fourth day in four cases not treated with serum. Agglutinins failed to develop in three cases not treated with serum. One of

From the Harlem Hospital Station of the Littauer Pneumonia Research Fund of New York University.

Our appreciation is expressed to loyal co-workers. Serum was produced through a grant from the Altman Foundation, and the children were studied, in part, through financial assistance from the Commonwealth Fund. The Metropolitan Life Insurance Company assisted the study through its Influenza Commission.

1. Sugg, J. Y.; Gaspari, E. L.; Fleming, W. L., and Neill, J. M.: Studies on Immunological Relationships Among the Pneumococci: I. A Virulent Strain of Pneumococcus Which is Immunologically Related to but Not Identical with Typical Strains of Type III Pneumococci, J. Exper. Med. **47**: 917 (June) 1928.

2. Cooper, Georgia; Edwards, Marguerite, and Rosenstein, Carolyn: The Separation of Types Among the Pneumococci Hitherto Called Group IV, and the Development of Therapeutic Antiserums for These Types, J. Exper. Med. **49**: 461 (March) 1929.

3. The increasing importance of pneumococcus type VIII is evidenced by the fact that during the current season, in the nine months from July 1, 1933, until April 1, 1934, there have been, in my service among the adults, thirty-seven cases of pneumonia due to pneumococcus type VIII, and one among the children in the pediatric service of Dr. Morris Gleich.

two fatal serum cases showed agglutinins on the third day; after this they were absent.

The production of serum was commenced in 1928 in the laboratories of the New York City Department of Health. Seventeen horses have been under immunization; two have been immunized for more than two years. Four are being immunized at present. Miss Cooper reports that the mortality of the horses was unusually high, the titer of the antiserums comparatively low and the duration of immunization to obtain usable serum unusually long. The concentration procedure was the same as for type I serum.

At the Lederle Laboratories, Inc., five horses have been immunized. For from six to eight months they were immunized with pneumococcus types IV, V, VII and VIII; then types IV and V were discontinued. Three of the horses produced from 1,000 to 4,000 units against type VII; the same animals showed only from 100 to 200 units against type VIII. Two of these were carried from eighteen to forty-eight months.

Frequently we encountered thermal or anaphylactoid reactions with the first dose of serum in a patient though he did not react with a second and larger dose of the same serum given a few hours later. A patient receiving the same serum as previously may react to a subsequent dose of the same size with a chill.

CONCLUSIONS

The mortality was less in patients suffering from pneumococcic pneumonia type VIII treated with serum than in those treated without serum. The duration of the illness was shorter in the serum treated than in those who did not have serum.

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Clinical Notes, Suggestions and New Instruments

BACILLUS WELCHII PANOPHTHALMITIS

SYDNEY WALKER JR., M.D., CHICAGO

Infections from Bacillus welchii in different parts of the body are not uncommon; in fact, they are often encountered in industrial practice. The statistics give a high mortality rate. The previous war experience has done little to control this situation. Owing to the rapidity of the spread of the infection and the destruction of tissue thereby, it would naturally be assumed that such an infection in or about the eye would be fatal. Such apparently is not the case.

To date, there have been ten cases reported in the literature: five in Great Britain, four in France and one in the United States. James [1] made the clinical diagnosis by gas bubbles in the anterior chamber and eviscerated the contents of the globe. Heath [2] had a case of panophthalmitis in which he eviscerated the contents. Cultures yielded positive results. Ridley [3] had a case of gas gangrene and panophthalmitis twenty-four hours after a penetrating wound of the eye. He eviscreated the contents. Hamilton [4] had two cases, the first on the third day after infection and the second on the fourth day. He eviscerated in both cases. Chaillous [5] had two cases and Darier [6] also had two. All four eyes were enucleated.

Berry [7] of Brooklyn had a patient who had been hit in the right eye by a chip from a nut and eighteen hours thereafter an active panophthalmitis developed. A roentgenogram showed a foreign body 2 by 4 mm. and 20 mm. back. Gas bubbles filled the whole anterior chamber, and he reports that a dark substance followed the knife out of the wound. Two days later the eye was enucleated and laboratory examination was positive for B. welchii.

1. James, R. R.: Ophth. Rev., London, 1910.
2. Heath, W. E.: Brit. J. Ophth. **13**: 574 (Nov.) 1929.
3. Ridley, F.: Tr. Ophth. Soc. U. Kingdom **49**: 221, 1929.
4. Hamilton, J. B.: Brit. J. Ophth. **14**: 482 (Sept.) 1930.
5. Chaillous, Paris, 1904-1905.
6. Darier, A., Clin. opht., Paris, **12**: 227, 1906.
7. Berry, E. M.: Am. J. Ophth., 1932.

REPORT OF CASE

T. V., a man, aged 35, an automobile mechanic, referred to my office, Nov. 1, 1933, by Dr. Carls, had hit his left eye with something while pounding on an axle shaft of an automobile. He did not seek treatment until the following morning, and when I saw him that day he had an intensely inflamed left eye with a beginning hypopyon. There was a small corneal wound at 5 o'clock on the dial near the limbus; the lens showed beginning cataract, and no view of the deeper structures was possible on account of the cloudy media and lens changes. What appeared to be a very small bubble was seen in the anterior chamber at this time. A roentgenogram showed a piece of steel 1 by 3 mm., 10 mm. back. The patient was sent to the hospital and the corneal wound was slightly enlarged with a cataract knife, which, when it was withdrawn, was followed by a coffee ground-like discharge. The magnet point was introduced and the steel extracted. Foreign protein was given and the patient was put to bed. In twenty-four hours there was a very marked panophthalmitis with boardlike induration of the bulbar conjunctiva. Evisceration of the globe was done at once and a drain inserted. Massive doses of B. tetani and B. welchii serum were given. The drain was left in for four days and hot moist compresses were applied to the socket. The patient made an uneventful recovery and left the hospital on the twelfth day.

Pus was taken from the eye for culture, November 6. A specimen of 1 cc. of thick yellow pus was sent to the laboratory. Gram stain showed many leukocytes. Frequent gram-positive, blunt bacilli both large and small were seen. Amorphous material and erythrocytes were present. With the Ziehl-Neelsen method no acid-fast bacilli were seen.

The specimen was inoculated on aerobic blood agar plates, endo plates, semianaerobic blood agar slants, and anaerobic blood agar slants. There was no growth of organisms in seventy-two hours.

The specimen inoculated into litmus milk under anaerobic conditions produced rapid acidification and coagulation. The production of a large amount of gas and a characteristic stormy fermentation was noted in twelve hours, at a temperature of 37 C.

A small amount of the specimen was inoculated into anaerobic beef heart broth and again a considerable production of gas and turbidity of broth were noticed. Stained smears of the litmus milk and beef heart broth demonstrated the presence of very large, thick, gram-positive bacilli.

Solid dextrose agar tubes showed further the violent production of gas and isolated colonies of the gram-positive bacilli obtained. The organism was identified culturally as being B. welchii.

COMMENT

Jordan's textbook on bacteriology states that gas gangrene nearly always consists of mixed aerobes and anaerobes of several species. Cultures of B. welchii do not blacken brain and meat cultures normally, but the presence of metallic iron produces discoloration. This fact may and probably does explain the coffee-like secretion that was noted by Dr. Berry in his case and also in mine.

The striking thing is the rarity of B. welchii in perforating and lacerated wounds of the eye. During the last thirteen years I have operated on more than 400 patients with intraocular steel and as many with penetrating and lacerated wounds of the eye, but this is my first case of B. welchii panophthalmitis. Most of these patients are from industrial plants and are exposed to different types of infection. Physicians in general industrial practice not infrequently have cases of B. welchii infection, yet this is only the second reported case of ocular infection in the United States. The further fact that the mortality in B. welchii infection in other parts of the body is so high and yet in ten known cases of B. welchii in eye injuries there have been uneventful recoveries in every case is worthy of note and may be explained by the absence of muscle tissue infection. With the venae vorticosae and the deep ciliary

vessels in close proximity, and possible exposure of the meninges through the optic nerve sheath, why there are no fatal cases is difficult to explain. Possibly earlier diagnosis and early removal of offending tissue may account for a portion; yet that in itself is not enough.

CONCLUSIONS

1. Intra-ocular steel is a potential carrier of B. welchii, even though rare.
2. Early diagnosis is apparently of prime importance.
3. B. welchii panophthalmitis apparently has not the grave prognosis that this infection has in other parts of the body.
4. The fact that the infection is limited to nonmuscular tissue may offer a better prognosis.

25 East Washington Street.

OTOMYCOSIS: REPORT OF CASE

OMAR C. AMSTUTZ, M.D., BELLEFONTAINE, OHIO

Among patients presenting themselves for treatment in southern Florida, particularly during the six weeks following the hurricane of Sept. 17 and 18, 1926, it was reported as not unusual for three or four new cases of otomycosis to be seen every day. In this locality, however, otologists of wide experience covering a number of years were certain that they had never recognized a case.

REPORT OF CASE

A woman, aged 23, a schoolteacher, complained that her left ear hurt, felt full and was slightly deaf. A dirty whitish layer was observed covering the drum and part of the adjacent auditory canal. A few drops of 5 per cent phenol in glycerin was placed in the ear and the patient was ordered to return. When the ear was examined two days later a few small black dots were visible, one of which was removed on the point of a paracentesis bistoury. Microscopic examination confirmed a suspicion that it was a mold sporangium with its unbranched hypha.

The remaining matted feltlike, mycelial mass was easily removed by irrigation with weak sodium bicarbonate solution and 10 drops of 70 per cent alcohol was placed in the external auditory canal. With the idea that, if the systemic use of iodides in such cases or even in pulmonary aspergillosis is justifiable, their local use might also be effective, I dropped a weak mixture of potassium iodide in water and tincture of iodine into the ear. Seven days later, however, there was additional mycelial growth to be removed by irrigation. At this time daily instillations of 2 per cent salicylic acid in 95 per cent alcohol were instituted for one week and then weekly for one month, at which time only a hard dry scaly material remained in the ear. Instillations of 5 per cent phenol in glycerin were resumed for a short while to loosen the material. The condition has not recurred during a three year period.

Through the courtesy of Dr. W. J. Kostir of Ohio State University, a potato culture transplant of the mold was identified as a mixture of Aspergillus niger (sooty mold) and Rhizopus nigricans (bread mold), of which the latter may or may not have been a contaminant.

Cultures were made on various mediums, all showing a fairly luxuriant growth. This was interpreted as indicating that the organism was not highly specialized for a life in contact with living tissues and was thus only secondarily pathogenic.

Potato cultures were arbitrarily selected and treated with such substances as sweet oil, castor oil, glycerin and water to determine any possible effect of materials that people commonly use in their ears. No effect was noted. Other such cultures were treated with 70 per cent alcohol, 2 per cent salicylic acid in 95 per cent alcohol and 5 per cent phenol in glycerin. The alcoholic solutions exhibited an inhibitory and even a fungicidal effect. Certain other such cultures were treated with weak iodine solutions, which may have had some minor effect in delaying the formation of sporangia. This would hardly invalidate the systemic use of iodides.

COMMENT

Molds are known to grow better in acid than in alkaline mediums. It would therefore seem more rational in such cases as this to irrigate with warm dilute sodium bicarbonate solution rather than with the commonly used boric acid solution. Moisture being necessary for mold growth, such irrigation should be followed by a strong alcoholic solution. An alkaline alcoholic solution might well form the basis of a new form of treatment. One author with a commendable view toward the comfort of his patient follows irrigation by instillation of 10 per cent cocaine in 1:1,000 epinephrine solution.

If, as is believed, spores will not germinate in a normally healthy meatus but require some form of exudate on which to grow, the nonmycotic condition producing such an exudate may remain to be treated even after each spore or hypha is definitely killed. If this is true, silver nitrate is said to be one of the best antiseptics and astringents. If the growth has penetrated deeply into the epithelium, however, no single treatment can be trusted to bring about a complete cure.

While in this case the prognosis was favorable, it is more grave if the drum is perforated, as the organism may enter and develop in the tympanic cavity and even in the mastoid cells. Although early diagnosis may make appropriate treatment more rapidly effective, many cases are delayed because even extensive invasions may take place without subjective symptoms.

209 East Columbus Avenue.

Council on Physical Therapy

THE COUNCIL ON PHYSICAL THERAPY OF THE AMERICAN MEDICAL ASSOCIATION HAS AUTHORIZED PUBLICATION OF THE FOLLOWING REPORTS.

H. A. CARTER, Secretary.

SUPER SELF-CONTAINED KROMAYER LAMP ACCEPTABLE

The Super Self-Contained Kromayer Lamp is manufactured by the Hanovia Chemical and Manufacturing Company, Newark, N. J. It is a water-cooled quartz mercury vapor arc lamp and is recommended for local application of ultraviolet radiation as a therapeutic measure.

Super Self-Contained Kromayer Lamp

The burner is a high pressure, low voltage, mercury vapor arc enclosed in a transparent fused quartz envelop. This burner is surrounded by a double wall casing. Cooling water circulates between the walls, thus carrying away the excess heat generated by the burner. Two small circular quartz windows in the double wall casing (window in each wall) permit the passage of ultraviolet and visible radiation; but, since the rays pass through the cooling water, the heat radiation is greatly inhibited. The unit is useful where close application to the skin is desirable. Suitably shaped quartz rods may be attached to the window, enabling the transmission of ultraviolet rays to inaccessible places.

The electrical characteristics are as follows:

Alternating Current:
- Line voltage, 105 to 120 volts (60 to 25 cycles)
- Starting amperage, 10 amperes
- Operating amperage (5 amperes, 220-volt line)
  (7 amperes, 115-volt line)
- Maximum burner voltage, 120 volts
- Minimum burner voltage, 100 volts

Direct Current
- Line voltage, 220 volts
- Operating amperage (120 volts, 5.5 amperes)
  (220 volts, 4.5 amperes)
- Starting amperage, 10 amperes
- Maximum burner voltage for 110-volt burner, 70 volts
- Minimum burner voltage for 220-volt burner, 120 volts

One unit was investigated in a clinic acceptable to the Council. The claims for the product meet the requirements of the Council as stipulated in the Official Rules. The Super Self-Contained Kromayer Lamp, therefore, is included in the Council's list of acceptable devices.

LEPEL HIGH FREQUENCY COMBINATION MACHINES AND ULTRAVIOLET LIGHT ATTACHMENTS ACCEPTABLE

The Lepel High Frequency Laboratories, Inc., of 39 West Sixtieth Street, New York, manufactures the following equipment:

Model 300, Lepel High Frequency Combination Machine designed for medical diathermy, surgical currents, including underwater cutting, coagulation, desiccation, and for energizing ultraviolet generators for local or general irradiation (fig. 1).

Model 310, this model being the same as 300 except that it is not equipped with cutting currents.

Model 510, Electro Surgical Machine designed for surgery, cutting under water, cutting in air, coagulation, desiccation, and also energizing Lepel Hand Lamps.

Model 600 and Model 610, Lepel Coagulators for diathermy, coagulation, desiccation and autocondensation, in combination with Lepel Cold Ultra Violet Light.

Model 700 and Model 710, Short Wave Generator with Lepel Internal Ultra Violet Quartz Hand Lamps, and Model 900-2 and Model 900-4, Multiple Diathermy Machines. The Multiple Diathermy Units are for hospital and physician's use.

One complete unit was examined in a laboratory and in clinics acceptable to the Council on Physical Therapy. The laboratory report on the machine indicated that the mechanical make-up and the electrical construction met the Council requirements for diathermy machines as published in THE JOURNAL, Sept. 2, 1933, page 776. The temperature rise in the transformer remained within the limits as specified by the American Institute of Electrical Engineers. The condensers, conductors, reactors, ammeter and wiring were reported satisfactory.

Fig. 1.—Lepel High Frequency Combination Machine

The firm claims that these machines will generate high frequency electrical currents in ample quantities for medical diathermy, autocondensation, coagulation and desiccation, and that they will generate sufficient surgical cutting currents for use in both air and water. The Council's investigation substantiated these claims. The more powerful units are equipped with ultraviolet generators energized by high frequency currents produced by the diathermy machine. These ultraviolet lamps are designed for both general and local irradiation. The ultraviolet equipment was investigated in a laboratory acceptable to the Council, and the report reads as follows:

The following data were obtained on the Lepel Ultraviolet Lamp:

The device examined consists of a high frequency diathermy machine with attachments for operating an assortment of lamps.

The lamp examined consists of a spherical quartz or Corex D bulb, about 3 inches (7.5 cm.) diameter, which is placed within a helical conductor that carries a high frequency current obtained from the transformer in a diathermy machine. The bulb is evacuated and contains a globule of mercury. There are no electrodes sealed into the bulb. The mercury vapor within the bulb is excited to luminescense by the high frequency "electrode-less discharge" from the 5,000 volt secondary of the transformer, which discharges through the helix.

The emission spectrum is essentially that of the neutral mercury atom, similar to that of the mecury arc (e. g., the Uviarc); though close to the walls of the bulb there are some weak spark lines, not present in the "hot" quartz mercury arc lamp. The spectral energy distribution and the erythemogenic efficiency of this lamp were found to be closely the same as that of the ordinary quartz mercury arc lamp. Practically the only difference is the energy flux density (intrinsic brightness) owing to the fact that, in the quartz mercury arc lamp, the luminous discharge is concentrated in a column that is less than 10 mm. diameter, whereas in the electrodeless discharge the radiation fills the entire bulb, 6 to 8 cm. in diameter.

The primary of the transformer in the diathermy machine was operated on 115 volts, 60 cycles, under which conditions by a suitable regulating device the milliammeter in the secondary indicated the current in the secondary required to operate the lamp; the normal currents being 3,000 milliamperes for the hand lamp and 4,200 milliamperes for the body lamp.

Two kinds of lamps, a "hand lamp" and a "body lamp"; and two kinds of lamp bulbs (of quartz, and of Corex D glass) were tested.

The following is a summary of the radiometric measurements of the ultraviolet radiant flux (U. V. Q.) in microwatts per square centimeter ($\mu W/cm^2$) of wavelengths shorter than and including 313 millimicrons, emitted by these lamps:

I. Hand Lamp, Quartz Bulb.
On 3,000 M. A.; U. V. Q. = 161 $\mu W/cm^2$ at 24" (61 cm.)
= 403 $\mu W/cm^2$ at 12" (30.5 cm.)
Erythemogenic efficiency = 0.331; 1 E. U. = 57 $\mu W/cm^2$ for a 15 min. exposure
= 14 $\mu W/cm^2$ for a 60 min. exposure.

II. Body Lamp, Corex Bulb.
On 4,200 M. A.; U. V. Q. = 242 $\mu W/cm^2$ at 24" (61 cm.)
Erythemogenic efficiency = 0.272; 1 E. U. = 73.5 $\mu W/cm^2$ for a 15 min. exposure
= 18.5 $\mu W/cm^2$ for a 60 min. exposure.

III. Body Lamp, Quartz Bulb.
Distance 24" (61 cm.)
On 4,200 M. A., U. V. W. = 543 $\mu W/cm^2$
4,000 M. A., U. V. W. = 494 $\mu W/cm^2$
3,800 M. A., U. V. W. = 450 $\mu W/cm^2$
3,500 M. A., U. V. W. = 357 $\mu W/cm^2$
slightly luminous = 25 $\mu W/cm^2$
Erythemogenic efficiency (normal operation 4,200 M. A.) = 0.313; 1 E. U. = 64 $\mu W/cm^2$ for a 15 min. exposure, = 16 $\mu W/cm^2$ for a 60 min. exposure.

From the foregoing data it follows that

the Hand Lamp emits (161 + 57 =) 2.8 E. U. (Quartz bulb)
the Body Lamp emits (242 + 73.5 =) 3.3 E. U. (Corex bulb)
the Body Lamp emits (543 + 64 =) 8.5 E. U. (Quartz bulb)

From this it appears that at a distance of 24 inches (61 cm.) from the center of the bulb in its reflector, the time to produce a minimum perceptible erythema is as follows: the hand lamp with quartz bulb 5.3 minutes; the body lamp with Corex bulb, 4.5 minutes; and the body lamp with a quartz bulb, 1.75 minutes.

This is in good agreement with the manufacturer's claims for effectiveness in producing an erythema. As already stated, the spectral energy distribution of these two lamps is practically the same as that of the "hot" quartz mercury arc lamp. These two lamps are eligible for acceptance on the same basis as other quartz mercury arc lamps already accepted by the Council.

Small generators of ultraviolet radiation have been designed by the firm, which are said to be useful in irradiation of the nose, sinus, trachea, middle ear, larynx, bladder, kidney, urethra, colon and stomach. The small lights come in diameters of 3, 5, 7 and 9 mm. The high frequency electric current generated by the units energizes the miniature quartz lamp bulbs,

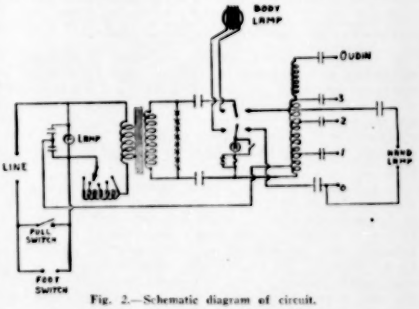

Fig. 2.—Schematic diagram of circuit.

which are mounted on the end of wired catheter tubes so that they can be inserted into small cavities, the firm claims. The Council has not received critical evidence substantiating the therapeutic value of these lamps and therefore does not recommend them for therapeutic purposes. However, the ultraviolet generators designed for general and orificial irradiation are acceptable. Figure 2 is a schematic diagram of the circuit.

As an adequate generator of high frequency current for medical and surgical diathermy, the unit appears satisfactory. The Council, therefore, includes the Lepel High Frequency Combination Machine and Ultraviolet Light Attachment in its list of accepted devices.

Council on Pharmacy and Chemistry

NEW AND NONOFFICIAL REMEDIES

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED AS CONFORMING TO THE RULES OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR ADMISSION TO NEW AND NONOFFICIAL REMEDIES. A COPY OF THE RULES ON WHICH THE COUNCIL BASES ITS ACTION WILL BE SENT ON APPLICATION.

PAUL NICHOLAS LEECH, Secretary.

POLLEN EXTRACTS-MULFORD (See New and Nonofficial Remedies, 1934, p. 38).

The following additional products, marketed in 5 cc. vials containing 2,000 pollen units per cubic centimeter, have been accepted:

Live Oak Pollen Extract-Mulford; Red Clover Pollen Extract-Mulford; Sweet Clover Pollen Extract-Mulford; Southern Ragweed Pollen Extract-Mulford.

BISMUTH SUBSALICYLATE (See New and Nonofficial Remedies, 1934, p. 116).

Ampules' Bismuth Subsalicylate 2 grains (0.13 Gm.) in Oil, 1 cc.: A suspension of bismuth subsalicylate-U. S. P., 0.13 Gm., camphor 0.1 Gm., and creosote 0.1 Gm., in sufficient olive oil to make 1 cc.

Prepared by the Cheplin Biological Laboratories, Inc., Syracuse, N. Y. No U. S. patent or trademark.

REPORTS OF THE COUNCIL

THE COUNCIL HAS AUTHORIZED PUBLICATION OF THE FOLLOWING REPORT.

PAUL NICHOLAS LEECH, Secretary.

DI-HYDRANOL NOT ACCEPTABLE FOR N. N. R.

Di-Hydranol was first presented for the Council's consideration by the manufacturer, Sharp & Dohme, Inc., under its chemical name, 2-4 dihydroxy phenyl n-heptane (June 25, 1930). At that time the firm stated that the substance was to be used as an "intestinal antiseptic" but gave no statement as to dosage or mode of administration. There was no mention of the name Di-Hydranol in that presentation. The product was again presented (Oct. 7, 1930), this time under the name Di-Hydranol. The claims were as follows:

(1) Di-Hydranol is more than 100 times as bactericidal as phenol.
(2) It is only absorbed to a small extent from the intestinal tract.
(3) It possesses a definite selective action against Gram-positive organisms including the "putrefactive flora" of the intestine.

The Council questioned whether the name Di-Hydranol is satisfactory and concluded (*a*) that the name Di-Hydranol be considered satisfactory for the product when and if it is accepted with the further approval of Leonard or others if necessary and the adoption of heptyl resorcinol as a synonym; (*b*) that consideration of acceptance await evidence of its clinical effectiveness. The name was proposed by Leonard and Feirer [1] in 1931.

In a further report the Council raised the question of the clinical value of Di-Hydranol and pointed out that the paper of Leonard and Feirer,[1] which was presented by Sharp & Dohme as evidence of the drug's usefulness as an intestinal antiseptic, was not sufficient to substantiate the claims made for the product. The Council voted that Di-Hydranol be held unacceptable because of lack of evidence of its clinical usefulness and adopted a statement setting forth the facts here summarized. However, as a result of a letter (May 5, 1931) from Sharp & Dohme in which the firm acceded to this action of the Council, the Council voted to postpone publication of the statement of its consideration of Di-Hydranol and to postpone consideration of the product. The firm agreed to desist from active propaganda for Di-Hydranol, to obtain further evidence of its usefulness from practicing physicians, and to revise the labels and pamphlet in accordance with changes suggested by the Council.

Nov. 23, 1933, the secretary of the Council wrote to Sharp & Dohme requesting clinical evidence, current advertising and labels. In reply to this letter Sharp & Dohme wrote (Dec. 6, 1933):

"We have corrected our labels and booklet according to suggestions from the Council as you will note from the three copies of each we are enclosing with this letter.

"We have supplied hundreds of clinical report blanks, referred to in our letter of May 5 [1931], to physicians and have received dozens of favorable clinical reports from them on the use of Di-hydranol but we now realize such reports would be looked upon by the Council as simply an expression of opinion from physicians and not acceptable clinical data. With this in mind we have since supplied an abundance of material to various investigators, in most cases connected with medical schools, but the gathering of properly controlled scientific clinical tests involves considerable expenditure of money which in many instances the institutions lacked during the past few years and which we were unable to supplement and keep within our budget requirements.

"We have just been advised that an investigator located in Chicago has completed his preliminary survey with Di-hydranol and that his results were so satisfactory he intends reading a paper on the subject in the spring in Cleveland and we understand this will be published at a later date. Obviously, the results of this experimental work are not available for us to submit to the Council at the present time.

"Inasmuch as we never have made any other claim than that Di-hydranol destroys the putrefactive flora of the intestinal tract, we suggest that the Council accept Di-hydranol with the provision we make no claims other than that stated above and neither will we until we can submit acceptable clinical evidence to substantiate any further claims."

It will be noted that in the last paragraph the firm suggests acceptance of Di-Hydranol by the Council with the understanding that the only claim made for it be that it destroys the "putrefactive" flora of the intestinal tract.

Later, evidence became available that the firm is now circularizing the profession on Di-Hydranol.

The labels and advertising booklet submitted by Sharp & Dohme, Inc., are in the same form as those revised according to their letter of May 5, 1931, and submitted to the Council on May 8 and May 14, 1931.

The labels indicate that the dosage forms are:

(*a*) 5 per cent solution of Di-Hydranol in olive oil.
(*b*) Soluble elastic capsules, 0.15 Gm. Di-Hydranol (a 25 per cent solution in olive oil).

The chief claim is stated on the label for the capsules as follows: "A powerfully germicidal substance possessing a selective bactericidal action against the putrefactive flora of the intestinal tract."

The first two sections of the booklet deal with the origin and chemical composition of Di-Hydranol. The third section, headed "Bactericidal Activity," makes the claims already considered by the Council. In addition, the last sentence of this section also mentions the possible use of Di-Hydranol as a protozo-acidal drug.

The next section of the booklet deals with toxicity. The statement is made that in seventy-nine adults receiving repeated doses of Di-Hydranol in elastic gelatin capsules of olive oil solution no toxic result was observed except the occasional occurrence of slight diarrhea or constipation. In the next section, dealing with excretion, the following statement is made:

"When administered by mouth, the bulk of each dose of Di-hydranol passes through the alimentary canal unabsorbed and may be detected in the stools by Barbour's test (5). The drug appears in the urine in easily detectable concentration only after massive doses. The fact that Di-hydranol remains largely unabsorbed first suggested its use as an intestinal antiseptic."

The remainder of the booklet summarizes the work of Leonard and Feirer [1] on the control of intestinal putrefaction in man by the oral administration of Di-Hydranol. This paper will be summarized and discussed later in this report. The last paragraph of the booklet states the indications for the drug as follows:

"Di-hydranol is indicated, therefore, in the treatment of cases in which benefit to the patient may be anticipated from the elimination of the putrefactive flora."

Hampil [2] has determined the phenol coefficient according to the U. S. Hygienic Laboratory method of the series of alkyl resorcinols to which heptyl resorcinol belongs. This author found that amyl, hexyl, heptyl and octyl resorcinols have the greatest bactericidal activity and that the activity of hexyl, heptyl and octyl resorcinols is greatly enhanced at 37 C. The decreased activity of compounds with longer carbon chains is

1. Leonard, V., and Feirer, W. A.: Bull. Johns Hopkins Hosp. **48**: 25 (Jan.) 1931.

2. Hampil, B.: J. Infect. Dis. **43**: 25 (July) 1928.

presumably due to insolubility, for increase of temperature and alkaline reaction, both of which increase the solubility, also increase the bactericidal activity. The presence of gelatin as other protein material decreases the bactericidal activity of resorcinols considerably and with heptyl resorcinol this decrease is almost 90 per cent. In the light of the latter observation the statement in the advertising pamphlet that Di-Hydranol has a bactericidal activity 100 times that of phenol at body temperature is rather misleading, since the compound must act in the intestine in the presence of proteins and protein split products.

The alkyl resorcinols, especially hexyl, heptyl and octyl resorcinol, have a selective action on many bacteria belonging to the gram-positive group, as demonstrated in vitro by Hampil [2] and in vivo by Ratcliffe [3] and Leonard and Feirer.[1] Ratcliffe showed by means of bacterial plate counts on stools that the gram-positive organisms of the acidophilus group are eliminated from the intestinal flora of rats under treatment with butyl, hexyl, heptyl and octyl resorcinols and that the gram-negative lactose fermenters of the coli-aerogenes group then become predominant. Leonard and Feirer appear to have shown the elimination of gram-positive spore forming anaerobes from the intestinal tract of human beings treated with heptyl resorcinol (Di-Hydranol). It is possible that these organisms were not always destroyed in the intestine but failed to grow in the stool cultures because of the bacteriostatic or bactericidal action of Di-Hydranol excreted in the feces. This point needs further investigation.

The toxic effects of Di-Hydranol are those of alkyl resorcinols in general. Eustis [4] reports colic and nausea with occasional vomiting in some of the cases treated with the drug in olive oil. Faust [5] reports that the toxic effects in human beings are negligible. David and Johnstone [6] report one case out of thirteen treated in which a number of watery stools followed the administration of Di-Hydranol. All investigators seem to agree that the drug is too irritating to be given in the crystalline form but phenylsalicylate coated pills or olive oil solution may be administered in large amounts without serious toxic symptoms.

Robbins [7] has made quantitative studies on the absorption and excretion of hexyl and heptyl resorcinol in dogs. This investigator found that after the administration of 1 Gm. doses by mouth of crystalline hexyl resorcinol an average of 67 per cent was recovered from the feces and 29 per cent from the urine. Heptyl resorcinol was absorbed to a much smaller extent, 96 per cent being excreted in the feces and only 1 per cent recovered from the urine. When hexyl resorcinol is given in olive oil, excretion in the urine is reduced from 29 per cent to 17 per cent. The drugs were recovered in the free state from the feces but the compounds excreted in the urine were in a nonbactericidal conjugated state. So far these observations coincide quite well with the claims made by the manufacturers of Di-Hydranol.

The claims of Sharp & Dohme, Inc., for the use of Di-Hydranol as an intestinal antiseptic are based largely on a paper by Leonard and Feirer.[1] These investigators assume no position in regard to the clinical importance of so-called intestinal putrefaction. They do maintain, however, that true intestinal putrefaction is caused by the group of spore bearing anaerobes to which Clostridium sporogenes and Clostridium putrificum belong. As a result of tests on many normal subjects in which increasing dilutions of stools are added to tubes of Holman's cooked meat medium, Leonard and Feirer conclude that the existence of any large numbers of putrefactive anaerobes in the intestine of human beings is comparatively rare. They treated twenty-eight subjects whose stools showed putrefactive anaerobes with Di-Hydranol over a period of from nineteen to twenty-nine days and observed the disappearance of Clostridium sporogenes and Clostridium putrificum from the feces. No return of the organisms occurred during a period of four months after treatment. These experiments, although not very extensive, do seem to warrant the conclusion of the authors that Di-Hydranol is effective in removing putrefactive anaerobes from the intestinal tract.

In regard to the clinical significance of these experiments, two questions must be raised:

1. Are the anaerobes Clostridium sporogenes and Clostridium putrificum solely responsible for the conditions called "intestinal putrefaction," "chronic, intestinal toxemia" and "autointoxication?"

2. Does putrefaction in the intestine have any clinical significance?

Leonard and Feirer apparently assume that the first question may be answered in the affirmative, but they give no references nor can any convincing evidence be found to support this position. Organisms of the colon-aerogenes group, which are not affected by Di-Hydranol, also produce "ptomaine bases" amines, indole, skatole and phenol from the products of digestion in the intestine. A paper by Eustis [4] describes the treatment of fourteen cases of "obstinate intestinal toxemia" with Di-Hydranol over a period of from one to six months. This author used Salkowski's test for indicanuria (indole produced by the colon-aerogenes group) as a guide to intestinal putrefaction. Improvement was noted in one of the cases but in the remaining thirteen cases no decrease in the indicanuria or evidences of clinical improvement were observed. This is the only direct clinical test of the value of Di-Hydranol in "intestinal putrefaction" that can at present be found. Sharp & Dohme, Inc., state in the letter quoted that other investigations are now in progress but have not as yet been published.

The clinical importance of "intestinal putrefaction" is at present and always has been a controversial subject, a fact admitted by Leonard and Feirer. The Council has held that the paper of Leonard and Feirer was insufficient to establish the clinical usefulness of Di-Hydranol.

Since the Council's last consideration of the drug, several papers have been written on the use of Di-Hydranol in the treatment of intestinal conditions other than "putrefaction." Leiva [8] compared the effectiveness of Di-Hydranol with that of phenyl salicylate-methenamine in the treatment of cholera carriers and found that the two drugs were about equally effective. All but two of the seventy-two cases treated finally became negative, most of them after from two to four days.

Favorable results have been reported by several investigators who used Di-Hydranol to treat intestinal protozoal infections in man and experimental animals.[9] Most of the protozoa (including Endamoeba histolytica in carriers) were eliminated except those with resistant cyst capsules. Endamoeba coli, Chilomastix and Giardia lamblia were less amenable to the treatment. Faust points out that Di-Hydranol appears especially valuable for chronic carrier cases and for those in which hospitalization is not practical.

In the treatment of helminth infestations, Di-Hydranol seems to have little if any advantage over hexyl resorcinol.[10] David and Johnstone in their paper quote two more investigators who report favorable results in the use of Di-Hydranol for intestinal protozoa and to a lesser extent for worms. The antihelminthic action of hexyl and heptyl resorcinols is greatly diminshed when the drugs are given in olive oil, the best results being obtained with sugar coated or phenyl salicylate coated pills.

In conclusion it may be stated that Di-Hydranol appears to offer more promise in the treatment of infestations with intestinal parasites, especially protozoa, than it does for the treatment of that vague clinical condition "intestinal putrefaction." No further experimental evidence has been advanced by the manufacturer to justify the use of the drug in the latter condition other than that offered with the first presentation in 1931 and on this evidence the drug was found unacceptable.

The Council declared Di-Hydranol unacceptable for inclusion in New and Nonofficial Remedies because of lack of clinical evidence of its usefulness. This action was taken without prejudice against future reconsideration.

3. Ratcliffe, H. L.: Am. J. Hyg. **10**: 643 (Nov.) 1929.
4. Eustis, A.: South. M. J. **25**: 1231 (Dec.) 1932.
5. Faust, E. C.: Proc. Soc. Exper. Biol. & Med. **27**: 905 (June) 1930.
6. David, N. A., and Johnstone, H. G.: Am. J. Hyg. **17**: 287 (Jan.) 1933.
7. Robbins: J. Pharmacol. & Exper. Therap. **43**: 325, 1931.
8. Leiva, Lamberto: Am. J. Trop. Med. **12**: 509 (Nov.) 1932.
9. Faust,[5] David, N. A., and Leake, C. D.: Proc. Soc. Exper. Biol. & Med. **28**: 196 (Nov.) 1930. Ratcliffe, H. L.: Am. J. Trop. Med. **11**: 285 (July) 1931.
10. Lamson, P. D.; Caldwell, E. L.; Brown, H. W., and Ward, C. B.: Am. J. Hyg. **15**: 306 (Jan.) 1932. David and Johnstone.[6]

Committee on Foods

ACCEPTED FOODS

THE FOLLOWING PRODUCTS HAVE BEEN ACCEPTED BY THE COMMITTEE ON FOODS OF THE AMERICAN MEDICAL ASSOCIATION FOLLOWING ANY NECESSARY CORRECTIONS OF THE LABELS AND ADVERTISING TO CONFORM TO THE RULES AND REGULATIONS. THESE PRODUCTS ARE APPROVED FOR ADVERTISING IN THE PUBLICATIONS OF THE AMERICAN MEDICAL ASSOCIATION, AND FOR GENERAL PROMULGATION TO THE PUBLIC. THEY WILL BE INCLUDED IN THE BOOK OF ACCEPTED FOODS TO BE PUBLISHED BY THE AMERICAN MEDICAL ASSOCIATION. RAYMOND HERTWIG, Secretary.

NUEFUD

Manufacturer.—Perewe Products Company, Brooklyn.

Description.—Small, noodle-like strips prepared from corn and potato starches and egg yolk.

Manufacture.—The potato and corn starches are sieved, mixed with liquid egg yolk until lumps are formed, kneaded to an elastic dough, rolled into sheets of one-sixteenth inch thickness, and thoroughly air dried. The dough sheets are shredded or cut into various forms, which are spread on canvas, dried at room temperature and packed into cartons.

Analysis (submitted by manufacturer).—

	per cent
Moisture	12.5
Ash	1.3
Lipoids	26.0
Protein (N × 6.25)	12.5
Starch (diastase method)	47.5
Lipoid phosphoric acid (P_2O_5)	0.66
Crude fiber	0.0
Carbohydrates (by difference)	47.0
Iron (Fe)	0.006
Magnesium (Mg)	0.01
Calcium (Ca)	0.05
Sodium (Na)	0.02
Potassium (K)	0.04

Calories.—4.7 per gram; 133 per ounce.

Claims of Manufacturer.—Rich in vitamins A and G; good source of vitamin B.

GRIDDLE KING SELF-RISING PANCAKE FLOUR

Manufacturer.—The Light Grain and Milling Company, Liberal, Kan.

Description.—A self-rising pancake flour containing winter wheat short patent flour, rye and corn flours, dextrose, calcium acid phosphate, sodium bicarbonate, salt, and dried skim milk.

Manufacture.—The ingredients are mixed in definite proportions in a batch mixer and automatically packed in fiber bags.

Analysis (submitted by manufacturer).—

	per cent
Moisture	8.8
Ash	5.2
Fat (ether extraction method)	1.5
Protein (N × 5.7)	9.7
Reducing sugars as invert sugar	3.4
Sucrose (copper reduction method)	2.1
Crude fiber	0.9
Carbohydrates other than crude fiber (by difference)	73.9

Calories.—3.5 per gram; 99 per ounce.

JELL-O
A GELATIN DESSERT

(CHERRY, LEMON, LIME, ORANGE, RASPBERRY AND STRAWBERRY FLAVORS)

Manufacturer.—The Jell-O Company, Inc., LeRoy, N. Y., Division of General Foods Corporation.

Description.—Dessert powders containing cane sugar, gelatin, tartaric or citric acid, fruit flavor, and natural color.

Manufacture.—The ingredients in definite proportions are mixed and automatically packed.

Analysis (submitted by manufacturer).—

	per cent
Moisture	0.8
Ash	0.2
Protein (N × 5.55)	11.0
Sucrose	86.0
Tartaric or citric acid	2.0

Calories.—3.9 per gram; 111 per ounce.

JELKE GOOD LUCK SHORTENING

Manufacturer.—John F. Jelke Company, Chicago.

Description.—Mixture of oleo oil and cottonseed oil.

Manufacture.—The two oils are thoroughly mixed in a steam jacketed tank, solidified and printed into pound blocks.

Analysis (submitted by manufacturer).—

	per cent
Fat (ether extract)	100
Protein (N × 6.25)	0.03
Ash	0.004

Calories.—4 per gram; 114 per ounce.

GOLD CHAIN WHOLE WHEAT FLOUR
RED CHAIN WHOLE WHEAT FLOUR

Manufacturer.—Universal Mills, Fort Worth, Texas.

Description.—Hard dark whole wheat flour.

Manufacture.—Whole wheat is cleaned, scoured, crushed and ground by the usual milling procedure. It is packed in packages for home use and sacks for commercial use.

Analysis (submitted by manufacturer).—

	per cent
Moisture	12.-13.
Ash	1.8
Fat (ether extraction method)	2.0
Protein (N × 5.7)	16.0
Reducing sugars as invert sugar	2.0
Crude fiber	1.8
Carbohydrates other than crude fiber (by difference)	65.9

Calories.—3.5 per gram; 99 per ounce.

Claims of Manufacturer.—Conforms to the United States Department of Agriculture definition and standard.

JELKE GOOD LUCK SANDWICH SPREAD

Manufacturer.—John F. Jelke Company, Chicago.

Description.—Sandwich spread containing water, cottonseed (or corn) oil, sweet pickle relish, sucrose, distilled vinegar, corn starch, salt, eggs, tapioca flour and mustard.

Manufacture.—The ingredients in definite proportions are prepared and admixed as described for Jelke Good Luck Salad Dressing (THE JOURNAL, May 5, 1934, p. 1472).

Analysis (submitted by manufacturer).—

	per cent
Moisture	42.7
Total ash	3.7
Sodium chloride	3.4
Fat (ether extract)	32.6
Protein (N × 6.25)	1.0
Reducing sugar as invert sugar	2.0
Sucrose (copper reduction method)	12.5
Crude fiber	0.6
Carbohydrates other than crude fiber (by difference)	18.3
Titratable acidity as acetic acid	1.1
Lipoid phosphoric acid as P_2O_5	0.027
Total phosphoric acid as P_2O_5	0.029

Calories.—3.8 per gram; 108 per ounce.

PLEE-ZING UNSWEETENED COOKING CHOCOLATE

Distributor.—Plee-Zing, Inc., Chicago.

Manufacturer.—Moffat, Inc., Boston.

Description.—Ground cacao nibs or "chocolate liquor" in cake form. Same as Moffat Cooking Chocolate Unsweetened, THE JOURNAL, Jan. 20, 1934, page 213.

Claims of Manufacturer.—Conforms to the United States Department of Agriculture definition and standard.

OCCIDENT FLOUR

(BLEACHED OR UNBLEACHED)

Manufacturer.—Russell Miller Milling Company, Minneapolis.

Description.—Hard wheat short patent flour; bleached or unbleached.

Manufacture.—Selected hard wheat is cleaned, washed, tempered and milled by essentially the same procedures as described in THE JOURNAL, June 18, 1932, page 2210. Chosen flour streams are blended and bleached with nitrogen oxide and benzoyl peroxide or nitrogen trichloride.

THE CLEVELAND SESSION

AMERICAN MEDICAL ASSOCIATION, EIGHTY-FIFTH ANNUAL SESSION
CLEVELAND, OHIO, JUNE 11-15, 1934

OFFICIAL CALL

TO THE OFFICERS, FELLOWS AND MEMBERS OF THE AMERICAN MEDICAL ASSOCIATION

The eighty-fifth annual session of the American Medical Association will be held in Cleveland, June 11-15, 1934.

The House of Delegates will convene at 10 a. m., Monday, June 11. In the House the representation of the various constituent associations for 1932, 1933 and 1934 is as follows:

Alabama	3	New Hampshire	1
Arizona	1	New Jersey	4
Arkansas	2	New Mexico	1
California	7	New York	17
Colorado	2	North Carolina	3
Connecticut	2	North Dakota	1
Delaware	1	Ohio	7
District of Columbia	1	Oklahoma	3
Florida	2	Oregon	1
Georgia	3	Pennsylvania	10
Idaho	1	Rhode Island	1
Illinois	10	South Carolina	2
Indiana	4	South Dakota	1
Iowa	3	Tennessee	3
Kansas	2	Texas	5
Kentucky	3	Utah	1
Louisiana	2	Vermont	1
Maine	1	Virginia	3
Maryland	2	Washington	2
Massachusetts	6	West Virginia	2
Michigan	5	Wisconsin	3
Minnesota	3	Wyoming	1
Mississippi	2	Alaska	1
Missouri	5	Hawaii	1
Montana	1	Isthmian Canal Zone	1
Nebraska	2	Philippine Islands	1
Nevada	1	Puerto Rico	1

The fifteen scientific sections of the American Medical Association, the Medical Corps of the Army, the Medical Corps of the Navy and the Public Health Service are entitled to one delegate each.

The Scientific Assembly of the Association will open with the general meeting to be held at 8 p. m., Tuesday, June 12. The sections will meet Wednesday, Thursday and Friday, June 13, 14 and 15, as follows:

CONVENING AT 9 A. M., THE SECTIONS ON

Surgery, General and Abdominal.
Ophthalmology.
Pediatrics.
Pharmacology and Therapeutics.
Nervous and Mental Diseases.
Dermatology and Syphilology.
Gastro-Enterology and Proctology.
Radiology

CONVENING AT 2 P. M., THE SECTIONS ON

Practice of Medicine.
Obstetrics, Gynecology and Abdominal Surgery.
Laryngology, Otology and Rhinology.
Pathology and Physiology.
Preventive and Industrial Medicine and Public Health.
Urology.
Orthopedic Surgery.

Miscellaneous Topics: Session on Forensic Medicine; Session on Nutrition

The Registration Department will be open from 8:30 a. m. until 5:30 p. m., Monday, Tuesday, Wednesday and Thursday, June 11, 12, 13 and 14, and from 8:30 a. m. to 12 noon, Friday, June 15.

DEAN LEWIS, President.
F. C. WARNSHUIS, Speaker, House of Delegates.
OLIN WEST, Secretary.

MEMBERS OF THE HOUSE OF DELEGATES

A Preliminary Roster of the Legislative Body of the American Medical Association

The list of members of the House of Delegates for the session is incomplete, as a number of the state associations are yet to hold their meetings at which delegates will be elected. The following is a list of the holdover members of the House of Delegates and of the newly elected members who have been reported to the Secretary in time to be included:

STATE DELEGATES

ALABAMA
C. A. Grote, Huntsville.
A. A. Walker, Birmingham.
J. N. Baker, Montgomery.

ARIZONA

ARKANSAS
Leonce J. Kosminsky, Texarkana.
William R. Broksher, Fort Smith.

CALIFORNIA
C. A. Dukes, Oakland.
J. B. Harris, Sacramento.
W. R. Molony, Los Angeles.
E. M. Pallette, Los Angeles.
Lyell C. Kinney, San Diego.
Fred B. Clarke, Long Beach.
Elbridge J. Best, San Francisco.

COLORADO
John W. Amesse, Denver.
Crum Epler, Pueblo.

CONNECTICUT
Walter R. Steiner, Hartford.
George Blumer, New Haven.

DELAWARE
James Beebe, Lewes.

DISTRICT OF COLUMBIA
Henry C. Macatee, Washington.

FLORIDA

GEORGIA
William H. Myers, Savannah.
C. W. Roberts, Atlanta.
Olin H. Weaver, Macon.

IDAHO
E. N. Roberts, Pocatello.

ILLINOIS
R. L. Green, Peoria.
C. S. Skaggs, East St. Louis.
Mather Pfeiffenberger, Alton.
C. E. Humiston, Chicago.
C. B. Reed, Chicago.

INDIANA
H. G. Hamer, Indianapolis.
R. L. Sensenich, South Bend.
Don F. Cameron, Fort Wayne.
F. S. Crockett, LaFayette.

IOWA
Fred Moore, Des Moines.

KANSAS
J. D. Colt Sr., Manhattan.

KENTUCKY
Irvin Abell, Louisville.
Virgil E. Simpson, Louisville.
A. T. McCormack, Louisville.

LOUISIANA
Wm. H. Seemann, New Orleans.
James Q. Graves, Monroe.

MAINE
Bertram L. Bryant, Bangor.

MARYLAND
Randolph Winslow, Baltimore.
Alexius McGlannan, Baltimore.

MASSACHUSETTS
W. H. Robey, Boston.
E. F. Cody, New Bedford.
R. I. Lee, Boston.
J. M. Birnie, Springfield.
C. E. Mongan, Somerville.
J. F. Burnham, Lawrence.

MICHIGAN
C. S. Gorsline, Battle Creek.
J. D. Brook, Grandville.
H. A. Luce, Detroit.
L. J. Hirschman, Detroit.
Carl F. Moll, Flint.

MINNESOTA
H. M. Johnson, Dawson.
W. F. Braasch, Rochester.
J. T. Christison, St. Paul.

MISSISSIPPI
James M. Acker Jr., Aberdeen.

MISSOURI
Emmett P. North, St. Louis.
E. J. Goodwin, St. Louis.

MONTANA
C. T. Pigot, Roundup.

NEBRASKA
R. W. Fouts, Omaha.
B. F. Bailey, Lincoln.

NEVADA
Horace J. Brown, Reno.

NEW HAMPSHIRE

NEW JERSEY
John F. Hagerty, Newark.
Walt P. Conaway, Atlantic City.
Ephraim R. Mulford, Burlington.
A. Haines Lippincott, Camden.

NEW MEXICO
H. A. Miller, Clovis.

NEW YORK
Thomas P. Farmer, Syracuse.
Charles H. Goodrich, Brooklyn.
Frederic E. Sondern, New York.
William D. Johnson, Batavia.
Arthur J. Bedell, Albany.
Harry R. Trick, Buffalo.
Edward R. Cunniffe, New York.
Grant C. Madill, Ogdensburg.
Floyd S. Winslow, Rochester.
Thomas M. Brennan, Brooklyn.
Daniel S. Dougherty, New York.
Nathan B. Van Etten, New York.
William H. Ross, Brentwood.
George A. Leitner, Piermont.
Orrin S. Wightman, New York.
George M. Fisher, Utica.
George W. Kosmak, New York.

NORTH CAROLINA
M. L. Stevens, Asheville.
D. A. Garrison, Gastonia.
G. L. Carrington, Burlington.

NORTH DAKOTA
Paul H. Burton, Fargo.

OHIO
Wells Teachnor Sr., Columbus.
Ben R. McClellan, Xenia.
E. R. Brush, Zanesville.
C. W. Stone, Cleveland.
J. P. DeWitt, Canton.
C. E. Kiely, Cincinnati.
C. W. Waggoner, Toledo.

OKLAHOMA
W. Albert Cook, Tulsa.
Horace Reed, Oklahoma City.
McLain Rogers, Clinton.

OREGON
Ralph A. Fenton, Portland.

PENNSYLVANIA
Walter F. Donaldson, Pittsburgh.
J. Norman Henry, Philadelphia.
Samuel P. Mengel, Wilkes-Barre.
Arthur C. Morgan, Philadelphia.
J. Newton Hunsberger, Norristown.
William H. Mayer, Pittsburgh.
Frank P. Lytle, Birdsboro.
Howard C. Frontz, Huntingdon.
Charles G. Strickland, Erie.
J. Allen Jackson, Danville.

RHODE ISLAND
Guy W. Wells, Providence.

SOUTH CAROLINA
Edgar A. Hines, Seneca.

SOUTH DAKOTA
W. A. Bates, Aberdeen.

TENNESSEE
H. H. Shoulders, Nashville.
E. G. Wood, Knoxville.
H. B. Everett, Memphis.

TEXAS
Holman Taylor, Fort Worth.
Felix P. Miller, El Paso.

UTAH
E. L. Skidmore, Salt Lake City.

VERMONT
William G. Ricker, St. Johnsbury.

VIRGINIA
Warren F. Draper, Richmond.
J. C. Flippin, University.
Hugh H. Trout, Roanoke.

WASHINGTON
Brien King, Seattle.
John H. O'Shea, Spokane.

WEST VIRGINIA
James R. Bloss, Huntington.
R. H. Walker, Charleston.

WISCONSIN
J. Gurney Taylor, Milwaukee
W. E. Bannen, La Crosse.
Joseph F. Smith, Wausau.

WYOMING
George P. Johnston, Cheyenne.

ALASKA

HAWAII
Alfred L. Craig, Honolulu.

ISTHMIAN CANAL ZONE
Lewis B. Bates, Ancon.

PHILIPPINE ISLANDS

PUERTO RICO
Oscar Costa-Mandry, San Juan.

DELEGATES FROM THE SECTIONS AND GOVERNMENT SERVICES

PRACTICE OF MEDICINE
James S. McLester, Birmingham, Ala.

SURGERY, GENERAL AND ABDOMINAL
J. Tate Mason, Seattle.

OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY
Arthur H. Curtis, Chicago.

OPHTHALMOLOGY
Emery Hill, Richmond, Va.

LARYNGOLOGY, OTOLOGY AND RHINOLOGY
Burt R. Shurly, Detroit.

PEDIATRICS
Isaac A. Abt, Chicago.

PHARMACOLOGY AND THERAPEUTICS
N. M. Keith, Rochester, Minn.

PATHOLOGY AND PHYSIOLOGY
D. J. Davis, Chicago.

NERVOUS AND MENTAL DISEASES
T. B. Throckmorton, Des Moines, Iowa.

DERMATOLOGY AND SYPHILOLOGY
Frank W. Cregor, Indianapolis.

PREVENTIVE AND INDUSTRIAL MEDICINE AND PUBLIC HEALTH
Stanley H. Osborn, Hartford, Conn.

UROLOGY
H. W. E. Walther, New Orleans.

ORTHOPEDIC SURGERY
Henry W. Meyerding, Rochester, Minn.

GASTRO-ENTEROLOGY AND PROCTOLOGY
Descum C. McKenney, Buffalo.

RADIOLOGY
Albert Soiland, Los Angeles.

UNITED STATES ARMY
Ross B. Bretz, Cleveland.

UNITED STATES NAVY
Charles E. Riggs, Washington, D. C.

UNITED STATES PUBLIC HEALTH SERVICE
L. R. Thompson, Washington, D. C.

OFFICERS OF THE AMERICAN MEDICAL ASSOCIATION, 1933-1934

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BUSINESS MANAGER—Will C. Braun, Chicago.

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COUNCIL ON SCIENTIFIC ASSEMBLY—Irvin Abell, Louisville, Ky., 1934; Frank Smithies, Chicago, 1935; Cyrus C. Sturgis, Ann Arbor, Mich., 1934; Frank H. Lahey, Chairman, Boston, 1937; James E. Paullin, Atlanta, Ga., 1938, and ex officio the President-Elect, the Editor, and the Secretary of the Association.

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BUREAU OF HEALTH AND PUBLIC INSTRUCTION—W. W. Bauer, Director, Chicago.

BUREAU OF INVESTIGATION—Arthur J. Cramp, Director, Chicago.

BUREAU OF MEDICAL ECONOMICS—R. G. Leland, Director, Chicago.

CHEMICAL LABORATORY—Paul Nicholas Leech, Director, Chicago.

LIBRARY—Marjorie Hutchins Moore, Librarian, Chicago.

CLEVELAND—THE CONVENTION CITY

Cleveland was a trading post on the Western Reserve frontier when Moses Cleaveland laid out the Public Square in 1796. Today it is the home of a million and a quarter people. The Public Square, which has always been the hub of its activities, was purchased by the Connecticut Land Company for $1.75 in 1795. Today, a reasonable sale price would be $20,000,000. Situated at the crossroads between the Atlantic States and the Middle West and founded by New Englanders, Cleveland has an atmosphere that places it somewhere between conservative New England and the breezier Middle West. Some of the smaller towns in the Western Reserve might easily be mistaken for New England villages, on casual inspection. Although numerically the sixth city in the United States, Cleveland has many of the comfortable attributes of the small town.

When the first cargo of iron ore from the Lake Superior region entered Cleveland's harbor in 1852, the immense lake traffic which is an important factor in the city's industrial life today was born. Visitors invariably find great fascination in the expanse of lake front with its busy wharves and ore docks, and the tug-escorted ore boats wending their tortuous way through the winding Cuyahoga River to the steel mills beyond.

Iron and steel have been Cleveland's premier industries since 1828, when the first smelter was established, and her present capacity is now over three million tons of pig iron annually. The industry now boasts continuous rolling mill equipment that is not equaled anywhere else in the world. The city also leads the world in production of wire nails, bolts and screws, malleable castings and heavy machinery and is one of the nation's largest hardware centers. Other leading Cleveland industries are multigraph and sewing machine manufacture, production of automotive bodies and parts, paints and varnish, ready-made clothing and knit goods, electrical machinery and apparatus, brick and tile. Ten thousand persons annually visit Nela Park to inspect the exhibits and demonstrations in this home of the National Lamp Works of the General Electric Company.

The branch banking system has reached its greatest development in Cleveland, and one of its banks has more depositors than any other bank in any other American city. Cleveland's stores offer rarely excelled shopping opportunities. Euclid Avenue is one of the world's most famous shopping streets. One of its great stores sells more than $50,000,000 worth of merchandise annually and is paid for it.

Two of Cleveland's noteworthy achievements in recent years are the development of the Mall, which extends from the lake front into the heart of the business district, and the completion of the mammoth Terminal group of buildings, which is a city within itself. The Mall, which is a huge T of 16.8 acres, will ultimately represent an investment of $40,000,000 and includes the Federal Building, the Public Library, the Board of Education Building, the Public Auditorium, City Hall, the Cuyahoga County Court House, and the new municipal stadium on the lake.

The Public Hall, where all the meetings of the annual session will be held, is perhaps the most complete and serviceable municipal auditorium in the country. The huge main auditorium seats 12,500, while the Music Hall seats 3,000. As these two auditoriums have a common stage, 16,000 persons can be seated for a single event. The Ball Room and Little Theater have seating capacities of 1,500 and 700, respectively, and ten other halls range in seating capacity from 90 to 500. The Hall contains 200,000 square feet for exhibition purposes and every modern exhibit facility. It is located in the heart of the downtown district within easy walking distance of the principal hotels.

MEDICAL CLEVELAND

The School of Medicine of Western Reserve University and its affiliated hospitals form an important unit of medical Cleveland. The physical plant of the medical school is a modern five-story limestone building completed in 1924, the gift of the late Samuel Mather. It is located on a court off Adelbert Road near the campus of Adelbert College of Western Reserve University. Directly opposite the school are Babies and Childrens and Maternity hospitals, while several hundred yards to the north are the handsome buildings of the University Hospitals, all connected with one another and with the medical school by tunnels. The university hospital group includes Lakeside Hospital, the Hanna House private pavilion, the Pathological Institute and the School of Nursing. Lakeside is Cleveland's newest and finest hospital and is one of the foremost examples of hospital architecture and equipment in the country. Its 400 bed capacity makes it the largest private hospital in Cleveland.

At the corner of Adelbert Road and Euclid Avenue is the beautiful home of the Cleveland Medical Library Association and the Academy of Medicine. This building, the Dudley P. Allen Memorial, houses the medical library, comprising some 50,000 volumes, a medical museum, seminar rooms, reading

THE TERMINAL TOWER GROUP, INCLUDING THE TERMINAL TOWER BUILDING, THE HOTEL CLEVELAND, THE MEDICAL ARTS BUILDING, THE BUILDERS' EXCHANGE, THE MIDLAND BANK, A LARGE DEPARTMENT STORE, AND RAILWAY TERMINAL FACILITIES. THE BELL TELEPHONE BUILDING IS AT THE EXTREME RIGHT

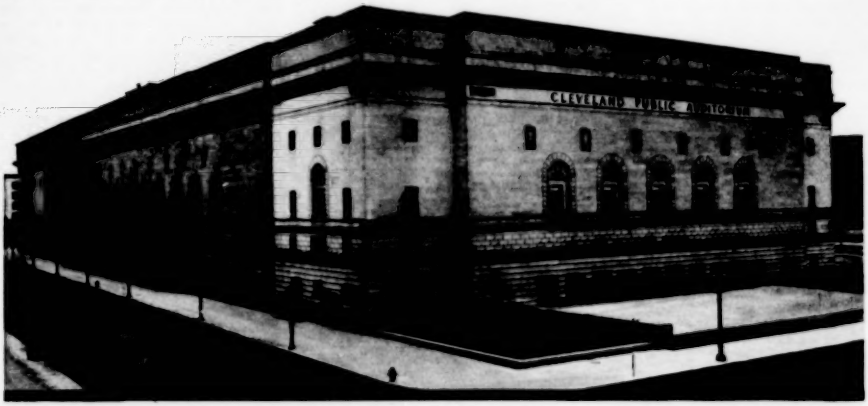
rooms, offices, executive offices of the Academy of Medicine and an auditorium seating 550. A short distance south of the medical group is the School of Dentistry, while surrounding it are the campus and various academic departments of the university and the Case School of Applied Sciences.

Within a stone's throw of the Medical Center are Severance Hall, the beautiful home of the Cleveland Orchestra, and the Museum of Art, with the Fine Arts Garden and lagoons stretching before them. The Western Reserve Historical Museum and the School of Education are located on University Circle, a short distance from the Medical Center. The Museum of Natural History is located on Euclid Avenue farther in town.

The university district lies about three and a half miles east of Public Square, and only a short distance from the main uptown business district at Euclid Avenue and East One Hundred and Fifth Street. A quarter of a mile north of this district is Mount Sinai Hospital, Cleveland's third largest private hospital. Just below Mount Sinai Hospital, the broad expanse of Rockefeller Park winds its way northward to Lake Erie. Woman's Hospital also occupies this district. Half a mile to the west are the buildings of the Cleveland Clinic, which include a new clinic building, the hospital, and the laboratories of the Clinic Research Foundation. The Cleveland Clinic, organized by Dr. George W. Crile and his associates ten years ago, is one of the largest and best known private clinics in the country.

general wards for medical, surgical, pediatric and dermatologic patients, the Psychopathic Division, the Contagious Hospitals, the Pathological Laboratories, and the new Lowman Pavilion for Tuberculous Patients. The psychopathic and tuberculosis divisions serve as clearing houses for the acute cases coming within their specialties. After study, many of these patients are then transferred to appropriate city, county or state institutions for further care.

Aside from the municipal institution, Cleveland's hospitals and welfare activities are coordinated by the Welfare Federation, which has been faithfully administered for the past fifteen years by public spirited citizens. The community fund idea found its inception and greatest development in Cleveland. Through this agency millions of dollars have been subscribed annually for the hospitals and welfare activities of the community. The Welfare Federation supervises the budgeting and division of funds among the various agencies. The Hospital Council is a subsidiary organization which aids the participating hospitals in their common financial relations and in settling mutual administrative problems.



THE CLEVELAND PUBLIC AUDITORIUM
Headquarters of Annual Meeting of American Medical Association

CLEVELAND HOSPITALS

In addition to Lakeside and affiliated hospitals, medical students receive clinical instruction in Charity and City hospitals. Charity Hospital, which is one of Cleveland's pioneer institutions, remains as the only hospital in downtown Cleveland. It is located on East Twenty-Second Street four blocks south of Euclid Avenue. Charity Hospital has contributed greatly to the medical history of the community. It has a capacity of 300 beds. Within recent years, Lakeside U. S. Marine, Huron Road, and St. Luke's hospitals have left the downtown section for less crowded quarters in the outlying districts on the east side.

The department of welfare of the city of Cleveland has as its director David S. Ingalls, former assistant secretary of the navy. Under his direction are the various public health activities of the municipality, including the department of health, City Hospital, the City Correction Farm at Warrensville, and Sunny Acres Tuberculosis Sanitarium. City Hospital houses 1,600 patients. The units included within its walls are the St. Luke's Hospital, affiliated with the Methodist Episcopal Church, occupies a monumental plant of recent completion on Shaker Boulevard, near the edge of Shaker Heights, in the southeastern part of the city. Its 390 bed capacity makes it the second largest private hospital.

St. Alexis Hospital, with its 220 bed capacity, is located in the steel mill district on the south side. It is one of the city's oldest hospitals. St. Alexis, Charity, St. John's and St. Ann's Maternity Hospital are the major Catholic hospitals of the community. St. John's Hospital is located on Detroit Avenue on the west side, and has 207 beds, while St. Ann's Maternity is located on lower Woodland Avenue.

Among the other community fund hospitals are Lutheran and Fairview hospitals on the west side, Grace Hospital on the southwest, Evangelical Deaconess in Brooklyn, and Glenville Hospital in the northeastern part of the city. Rainbow Hospital, located in South Euclid, affiliated with the university, is a 125 bed convalescent hospital for chronic orthopedic and medical conditions among children. Huron Road Hospital has a new home nearing completion in East Cleveland.

THE ACADEMY OF MEDICINE

The Academy of Medicine of Cleveland is fortunate in having its own plant in conjunction with the Cleveland Medical Library. All its administrative offices and meeting rooms are located here. The scientific activities of the Academy include monthly general meetings and monthly or quarterly meetings

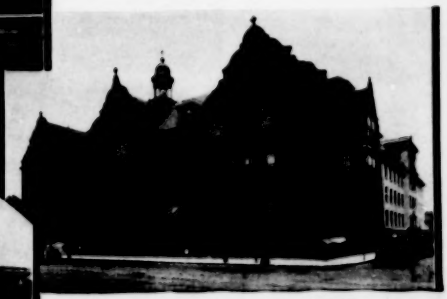
MT. SINAI HOSPITAL

WESTERN RESERVE
University Hospital Group. The Academy of Medicine and Allen Memorial Medical Library Are in the Right Foreground

THE CHARITY HOSPITAL

Above—THE CLEVELAND CLINIC HOSPITAL

Above—THE CITY HOSPITAL



Above—THE ST. ALEXIS HOSPITAL

Left—ST. LUKE'S HOSPITAL

SOME CLEVELAND HOSPITALS

of the following sections: Clinical and Pathological, Oto-Laryngological and Ophthalmological, Obstetrical and Gynecological, Industrial and Orthopedic, Pediatric, Military, and Practice of Medicine.

In addition to the usual organization committees, the Academy has an active economics committee, which is studying many pressing economic problems, making contacts with similar committees throughout the country, and advising the membership concerning problems studied. The Health Education Committee sponsors a series of educational lectures to the public annually and has sponsored radio programs. A committee on postgraduate study has presented courses on diseases of the respiratory tract and diseases of the gastro-intestinal tract, which have been well attended by the membership during the past two years. Special clinical demonstrations of latest methods of immunization were given the members prior to the preschool roundup last summer. A course on obstetrics and gynecology has been projected for next year.

The Academy has a full time executive office, a twenty-four hour call bureau service for members and information service for the public, and publishes a monthly bulletin. The Academy is responsible for developing the Cleveland Dispensary Admissions Plan, which has been widely copied elsewhere and which has been instrumental in maintaining in private practice thousands of patients who would otherwise have become dispensary clients. The Academy also put in effect a plan for rating patients of the "white collar class" and placing at their disposal a lower cost consultation service.

CLEVELAND AS A SUMMER RESORT

Lake Erie breezes help to maintain a comfortable temperature in Cleveland throughout practically the entire summer. This fact, together with the unexcelled facilities for outdoor rest and recreation, make the city and surrounding country an ideal summer resort. The lake shore for many miles is dotted with summer colonies and several excellent amusement parks. Lake Erie provides admirable swimming, sailing, speed boating and fishing. Numerous day or overnight trips on the large lake steamers are available. In addition, there are numerous small lakes within a radius of fifty miles of the city which provide excellent swimming, boating and fishing, and several well stocked streams to tempt the angler. The district abounds in golf courses, some of them with as fine layouts as are to be found anywhere in the country. Many excellent clay courts are available for devotees of tennis. The Metropolitan Park system and city parks include miles of parkways and beauty spots for exploration on foot, horseback or motor. Many excellent stables and bridle paths which wind through the entire Cleveland district promise the horseman many hours of pleasant exploration. Hundreds of miles of excellent highways take the motorist through beautiful valleys, over hilly country or along the lake shore, and inns that provide excellent meals and comfortable lodging dot the countryside. In the city, theaters, night clubs and restaurants abound.

Cleveland is easily reached by water, rail, air and highway, being located on the main routes of all methods of travel, as is described in the item which follows.

TRANSPORTATION

Railroad Rates to Cleveland

Special rates have been granted for the benefit of members of the American Medical Association and dependent members of their families who will attend the annual session at Cleveland.

The Central, the New England, the Southwestern, the Transcontinental and the Western Passenger Associations, as well as the Eastern Lines of the Canadian Passenger Association, have granted a rate of one and one-third fares. This rate is granted also by the Western Lines of the Canadian Passenger Association from Winnipeg and certain points in British Columbia.

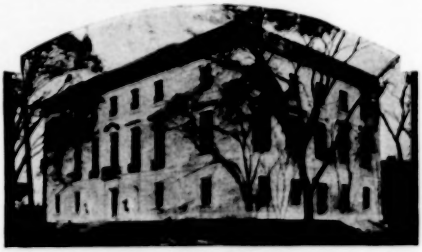
To have the benefit of a return rate of one-third fare, it will be necessary for each member to secure a CERTIFICATE from the railroad ticket agent when he purchases his ticket to Cleveland. The certificate must be certified to by the Secretary of the American Medical Association, which may be done at the registration Bureau, to be located in the Cleveland Public Auditorium, *and must then be validated by a representative of the railroads.* When the certificate is so certified and validated, it will entitle its holder to purchase a return ticket to his home, over the same route traveled to Cleveland, at one-third fare.

If the ticket agent at the member's home station does not have the certificate, he will furnish information as to where it may be obtained.

The certificate is *not* a receipt for money paid for a ticket, nor will a receipt entitle its holder to secure a return trip ticket at a reduced rate. Be sure to ask the ticket agent for a CERTIFICATE.

The dates of sale of tickets to Cleveland will be June 5 to 13 in the territory of the Eastern Lines of the Canadian Passenger Association, as well as in the territories of the Central Passenger Association, the New England Passenger Association, the Transcontinental Passenger Association and the Western Passenger Association, and from Arkansas, Kansas, Louisiana, Missouri, as well as Natchez, Miss., and Memphis, Tenn., in the territory of the Southwestern Passenger Association. The dates of sale of tickets from Oklahoma and Texas in the territory of the Southwestern Passenger Association will be June 4 to 12.

Certificates properly certified and validated will be honored for purchasing tickets for the return journey at one-third fare up to and including June 19. No refund of fare will be made on account of failure to present validated certificate when purchasing return ticket. The return ticket must be used over the same route as that traveled going to Cleveland.



THE ALLEN MEMORIAL MEDICAL LIBRARY

When you purchase your ticket to Cleveland, secure from the railroad ticket agent a CERTIFICATE, which, when properly certified to and validated, will entitle you to purchase a return ticket to your home, over the same route traveled to Cleveland, at one-third the fare paid for your ticket to Cleveland.

BE SURE TO ASK YOUR RAILROAD TICKET AGENT FOR A CERTIFICATE WHEN PURCHASING YOUR TICKET TO CLEVELAND.

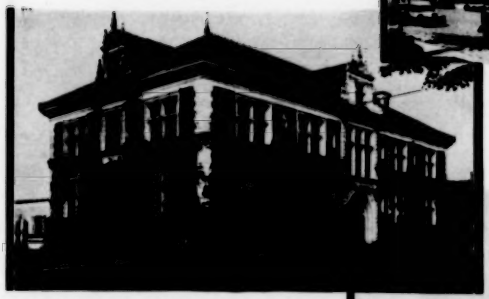
Summer Excursion Fares

Summer excursion fares in the territories of the Transcontinental and Western Passenger Associations, which are on a lower basis than convention fares, will apply from the following territory: Arizona, British Columbia, California, Colorado (except Julesburg), Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming.

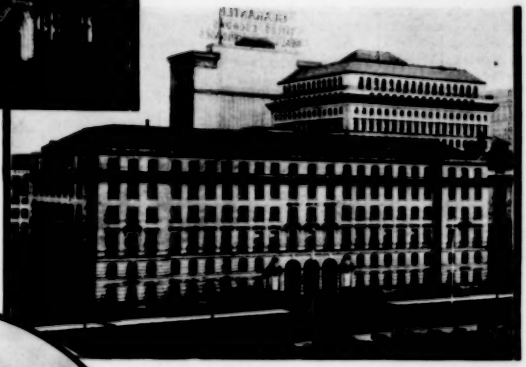
Boat Transportation Between Cleveland and Buffalo

The Cleveland and Buffalo Transit Company has announced that round trip rail tickets in either direction optionally provide rail or lake travel between Cleveland and Buffalo. Detailed information may be secured from the Cleveland and Buffalo Transit Company, Cleveland, Ohio.

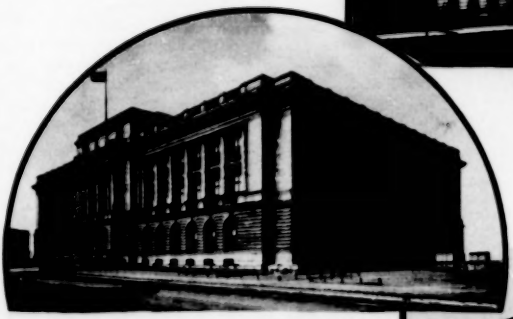
Above—The CUYAHOGA COUNTY COURT HOUSE



Above—THE CLEVELAND SCHOOL OF ART



THE BOARD OF EDUCATION BUILDING IN CLEVELAND



THE CLEVELAND CITY HALL

THE CLEVELAND PUBLIC LIBRARY

REGISTRATION

The Bureau of Registration will be located in the Cleveland Public Auditorium, Lakeside Avenue at East Sixth Street. Members of the Committee on Registration of the Local Committee on Arrangements will be on hand to assist those who desire to register. A branch postoffice in charge of government postoffice officials will be available for visitors, and an information bureau will be operated in connection with the Bureau of Registration.

Who May Register

Only Fellows, Affiliate, Associate and Honorary Fellows, and Invited Guests may register and take part in the work of the sections. Fellows of the Scientific Assembly are those who have, on the prescribed form, applied for Fellowship, subscribed to THE JOURNAL, and paid their Fellowship dues for the current year. The annual Fellowship dues provide a subscription to THE JOURNAL for one year. Fellowship cards are sent to all Fellows after payment of annual dues, and these cards should be presented at the registration window. Any who have not received cards for 1934 should secure them at once by writing to the American Medical Association, 535 North Dearborn Street, Chicago.

Members in Good Standing Eligible to Fellowship

Members in good standing in component county medical societies are members of constituent state associations and of the American Medical Association. All members in good standing may apply for Fellowship in the Scientific Assembly and are urged to qualify as Fellows before leaving home in order that pocket cards may be secured and brought to Cleveland so that registration can be more easily and more promptly effected. Application forms may be had on request. Subscribers to THE JOURNAL who have not received pocket cards for 1934 should write to the American Medical Association for application blanks and information as to further requirements.

Register Early

Fellows living in Cleveland, as well as all other Fellows who are in Cleveland on Monday and Tuesday, should register as early as possible. The names of those who register will appear in the *Daily Bulletin* the next day, and this will enable visiting physicians to find friends if they have registered.

Suggestions That Will Facilitate Registration

Fellows should fill out completely the spaces on both sections of the front of the *white* registration card, which will be found on the tables in front of the Registration Bureau.

Physicians who desire to qualify as Fellows should fill out completely the spaces on both sections of the front of the *blue* registration card, and sign the application on the back. These cards will be found on the tables.

Entries on the registration cards should be written plainly, or printed, as the cards are given to the printer to use as "copy" for the *Daily Bulletin*, published on Tuesday, Wednesday, Thursday and Friday of the week of the session.

Fellows who have their pocket cards with them can be registered with little or no delay. They should present the filled out *white* registration card, together with their pocket cards, at one of the windows marked "Registration by Pocket Card." There the clerk will compare the two cards, stamp the pocket card and return it, and supply the Fellow with a badge, a copy of the official program and other printed matter of interest to those attending the annual session.

As previously stated, it will assist in registering if those who desire to qualify as Fellows will file their applications and qualify as Fellows by writing directly to the American Medical Association, 535 North Dearborn Street, Chicago, so that their Fellowship may be entered not later than May 21. Any applications received later than May 21 will be given prompt attention, but the Fellowship pocket card may not reach the applicant in time for him to register at the Cleveland session.

It will be possible for members of the organization to qualify as Fellows at Cleveland. In order to do this, applicants for Fellowship will be required to fill out both sections of the front of the *blue* registration card and to sign the formal application that is printed on the reverse side of the card. As already stated, registration can be effected more easily and more promptly if members qualify as Fellows before leaving home.

It is suggested that those who apply for Fellowship at Cleveland provide themselves, before leaving home, with certificates signed by the secretaries of their state associations, attesting that they are members in good standing in state and county branches of the organization. A state membership card for 1934 will be acceptable. The certificate or membership card should be presented along with the filled in *blue* registration card at the window in the booth marked "Applicants for Fellowship and Invited Guests."

Registration for Delegates at the Hotel Statler

General Officers of the American Medical Association and members of the House of Delegates may register for the Scientific Assembly at a booth near the Ball Room of the Hotel Statler. This arrangement is made for the convenience of the members of the House of Delegates, which will convene on Monday morning at 10 o'clock in the Ball Room of the Hotel Statler. Delegates are requested to register for the Scientific Assembly before presenting credentials to the Reference Committee on Credentials of the House of Delegates. Registration of delegates for the Scientific Assembly will begin at 8 o'clock, Monday morning, June 11, and delegates are urged to register early so that all members of the House of Delegates may be seated in time for the opening session of the House.

CLEVELAND HOTELS

A list of Cleveland hotels is presented for the benefit of those who expect to attend the annual session of the American Medical Association, June 11-15. Dr. Hubert C. King is the chairman of the Subcommittee on Hotels of the Local Committee on Arrangements and may be addressed at 1604 Terminal Tower, Cleveland, Ohio. The advertising announcement and coupon for reservations appear on advertising page 95 of this issue.

Hotels at Cleveland

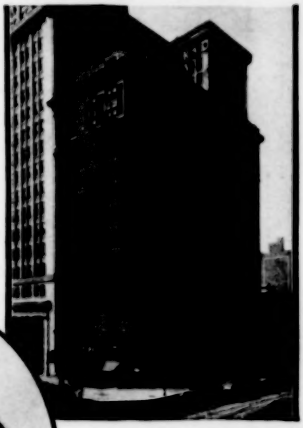
Name and Address	Room—One Person		Room—Two Persons		
				With Bath	
	Without Bath	With Bath	Without Bath	Double Bed	Twin Beds
Allerton Chester Ave. & E. 13th St.	$2.00-2.50	$3.00-3.50	$3.00-4.00	$4.00	$4.50
Auditorium St. Clair Ave. & E. 6th St.	.....	2.00-3.00	.....	3.50-4.50	3-6
Carter Prospect Ave. & E. 9th St.	.....	2.50-3.00	.....	4.00-6.00	5-6
Cleveland Public Square	.....	3.50-6.00	.....	4.00-8.00	5-10
Colonial 523 Prospect Avenue	1.50	2.50	2.50	3.00	3.50-4
Fern Hall 3250 Euclid Avenue	.....	1.50-2.50	.....	2.50-3.00	3.50
Gillsy 1811 E. 9th Street	1.50	2.00-2.50	2.50	3.00-3.50	4.00
Hollenden Superior Ave. & E. 6th St.	.....	2.50-6.00	.....	3.50-7.00	5-12
Mecca 1862 E. 9th Street	.....	1.75-2.00	.....	2.50-3.00	4.00
New Amsterdam Euclid Ave. & E. 22d St.	1.50-2.00	2.50-3.50	2.50-3.00	3.50-4.50	4.50-5
Olmsted Superior Ave. & E. 9th St.	.....	2.00-3.50	.....	3.50-4.50	5.00
Statler Euclid Ave. & E. 12th St.	.....	2.50-6.00	.....	4.50-8.00	5-8
Sterling Prospect & E. 30th St.	.....	2.00-3.00	.....	3.00-4.00	3.50-5
RESIDENTIAL HOTELS					
Alcazar Surrey & Derbyshire Rds.	.....	3.00	.....	5.00	5.00
Belmont 2044 Euclid Avenue	.....	2.50	.....	4.00	5.00
Bolton Carnegie Ave. & E. 89th St.	.....	2.00-3.00	.....	3.00-3.50	.....
Devon Hall 1588 Ansel Road	1.25	.....	2.00	.....	.....
Lake Shore 12306 Edgewater Drive	.....	2.00-3.50	.....	3.50-5.50	4-6
Park Lane Park Lane & E. 105th St.	.....	2.50-3.50	.....	.....	4-6
Sovereign East Blvd. & E. 105th St.	.....	2.00	.....	3.00	5.00
Wade Park Manor Park Lane & E. 107th St.	.....	3.00-4.00	.....	.....	5-6
Westlake Blount Road	.....	2.50	.....	4.00	4.50

NOTE.—A number of the lower priced single rooms are equipped with double beds. Many of these rooms are available for occupancy by a doctor and his wife at only $1 more than the single rate.

THE CARTER HOTEL

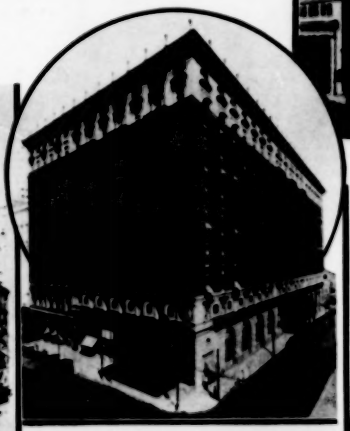
Above—THE HOTEL AUDITORIUM

THE HOTEL HOLLENDEN



THE HOTEL OLMSTED

THE HOTEL CLEVELAND

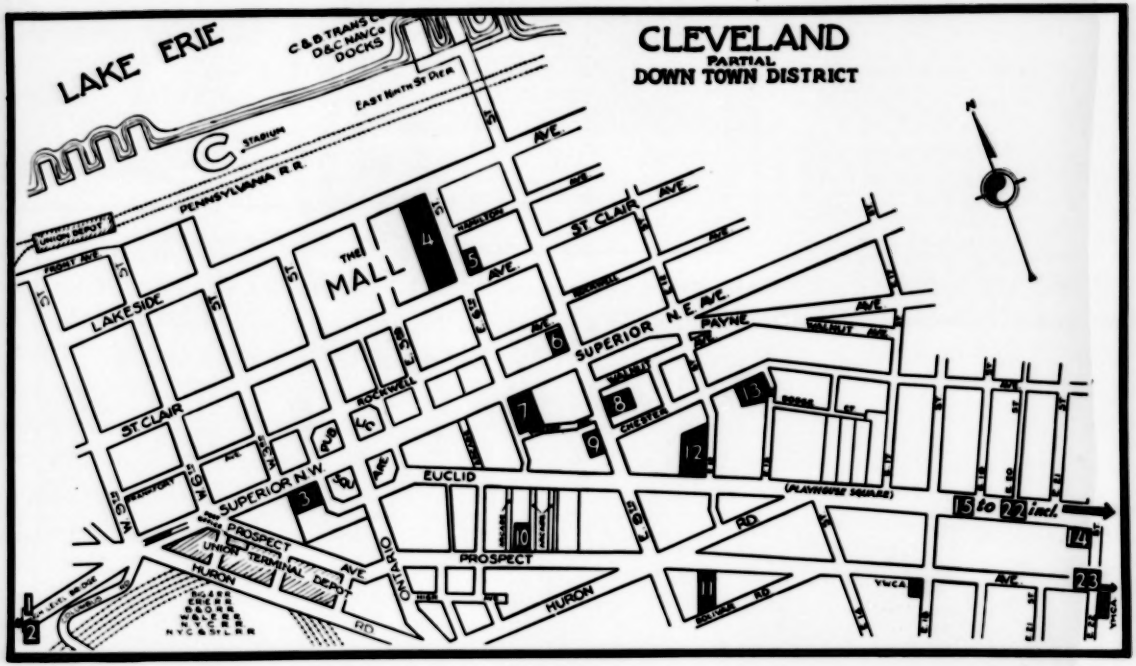


THE HOTEL STATLER

Right—THE ALLERTON HOTEL

SOME CLEVELAND HOTELS

MAP OF A PART OF CLEVELAND



KEY TO MAP

Alcazar Hotel.....15	Colonial Hotel.....10	Olmsted Hotel..... 6
Allerton Hotel.....13	Devon Hall.....18	Park Lane Hotel.....20
Auditorium Hotel..... 5	Fern Hall.....19	Sovereign Hotel.....21
Belmont Hotel.....16	Gillsy Hotel..... 8	Statler Hotel.....12
Bolton Hotel.....17	Hollenden Hotel..... 7	Sterling Hotel.....23
Carter Hotel.....11	Lake Shore Hotel..... 1	Wade Park Manor.....22
Cleveland Hotel..... 3	Mecca Hotel..... 9	Westlake Hotel..... 2
Cleveland Public Auditorium..... 4	New Amsterdam Hotel.....14	

GENERAL SCIENTIFIC MEETINGS

MONDAY, JUNE 11—2 P. M.

Radiation in Cancer
ARTHUR C. CHRISTIE, Washington, D. C.

Silicosis (Various Forms of Pneumonoconiosis and their Relation to Tuberculosis)
LEROY U. GARDNER, Saranac Lake, N. Y.

Artificial Pneumothorax — J. A. MYERS, Minneapolis

Prostatic Hypertrophy — N. G. ALCOCK, Iowa City

Bronchiectasis in Children — ISAAC A. ABT, Chicago

TUESDAY, JUNE 12—9:30 A. M.

Treatment of Chronic Bright's Disease
JAMES P. O'HARE, Boston

Goiter and Newer Developments in Management of Thyroid Disease — FRANK H. LAHEY, Boston

Dyspnea — JOHN C. MEAKINS, Montreal

Significance of Abdominal Pain — DEAN LEWIS, Baltimore

New Methods in the Treatment of Syphilis
UDO J. WILE, Ann Arbor, Mich.

TUESDAY, JUNE 12—2 P. M.

Epidemiology of Amebiasis
CHARLES F. CRAIG, New Orleans

Pathology of Amebiasis
HENRY E. MELENEY, Nashville, Tenn.

Clinical Diagnosis of Amebiasis
SIDNEY K. SIMON, New Orleans

Laboratory Diagnosis of Amebiasis
T. B. MAGATH, Rochester, Minn.

Prophylaxis of Amebiasis
G. W. McCOY, Washington, D. C.

Treatment of Amebiasis — ALFRED C. REED, San Francisco

Prolonged Influences and Complications of Intestinal Amebiasis
KENNETH M. LYNCH, Charleston, S. C.

MEETING PLACES

HOUSE OF DELEGATES: Ballroom of the Hotel Statler, Euclid Avenue and East Twelfth Street.

OPENING GENERAL MEETING: Music Hall, Arena Floor, Cleveland Public Auditorium.

GENERAL SCIENTIFIC MEETINGS: Music Hall, Arena Floor, Cleveland Public Auditorium.

SECTIONS OF SCIENTIFIC ASSEMBLY

PRACTICE OF MEDICINE: Ballroom, Fourth Floor, Cleveland Public Auditorium.

SURGERY, GENERAL AND ABDOMINAL: Music Hall, Arena Floor, Cleveland Public Auditorium.

OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY: Music Hall, Arena Floor, Cleveland Public Auditorium.

OPHTHALMOLOGY: Little Theater, Arena Floor, Cleveland Public Auditorium.

LARYNGOLOGY, OTOLOGY AND RHINOLOGY: Little Theater, Arena Floor, Cleveland Public Auditorium.

PEDIATRICS: Ballroom, Fourth Floor, Cleveland Public Auditorium.

PHARMACOLOGY AND THERAPEUTICS: South Hall C, Fourth Floor, Cleveland Public Auditorium.

PATHOLOGY AND PHYSIOLOGY: South Hall C, Fourth Floor, Cleveland Public Auditorium.

NERVOUS AND MENTAL DISEASES: South Hall A, Second Floor, Cleveland Public Auditorium.

DERMATOLOGY AND SYPHILOLOGY: Club Room B, Third Floor, Cleveland Public Auditorium.

PREVENTIVE AND INDUSTRIAL MEDICINE AND PUBLIC HEALTH: South Hall B, Third Floor, Cleveland Public Auditorium.

UROLOGY: Club Room B, Third Floor, Cleveland Public Auditorium.

ORTHOPEDIC SURGERY: South Hall A, Second Floor, Cleveland Public Auditorium.

GASTRO-ENTEROLOGY AND PROCTOLOGY: South Hall B, Third Floor, Cleveland Public Auditorium.

RADIOLOGY: North Hall, Lower Level, Cleveland Public Auditorium.

MISCELLANEOUS TOPICS, SESSION ON FORENSIC MEDICINE AND ON NUTRITION: North Hall, Lower Level, Cleveland Public Auditorium.

The Cleveland Public Auditorium is located on Lakeside Avenue at East Sixth Street.

LOCAL COMMITTEE ON ARRANGEMENTS

CHARLES W. STONE, Chairman

Subcommittee on Sections and Section Work: H. V. Paryzek, Chairman.
Practice of Medicine: M. A. Blankenhorn.
Surgery, General and Abdominal: C. H. Lenhart.
Obstetrics, Gynecology and Abdominal Surgery: A. J. Skeel.
Ophthalmology: P. G. Moore.
Laryngology, Otology and Rhinology: W. V. Mullin.
Pediatrics: C. W. Burhans.
Pharmacology and Therapeutics: Torald Sollmann.
Pathology and Physiology: H. T. Karsner and C. J. Wiggers.
Nervous and Mental Diseases: H. H. Drysdale.
Dermatology and Syphilology: J. R. Driver.
Preventive and Industrial Medicine and Public Health: A. G. Cranch and H. L. Rockwood.
Urology: T. P. Shupe.
Orthopedic Surgery: W. G. Stern.
Gastro-Enterology and Proctology: F. C. Oldenburg and C. C. Perry.
Radiology: W. C. Hill and L. A. Pomeroy.

Subcommittee on Registration: Richard Dexter, Chairman.
Subcommittee on Technical Exhibits: M. B. Cohen, Chairman.
Subcommittee on Scientific Exhibit: R. L. Haden, Chairman.
Subcommittee on Hotels: H. C. King, Chairman.
Subcommittee on Printing and Information: D. M. Glover, Chairman.
Subcommittee on Publicity: Mr. H. Van Y. Caldwell, Chairman.
Subcommittee on Transportation: P. V. Duffy, Chairman.
Subcommittee on Finance: A. A. Jenkins, Chairman.
Subcommittee on Women Physicians: Anna May Young, Chairman.
Subcommittee on Entertainment:
Dinner to Delegates: C. L. Cummer and C. W. Stone.
Alumni Dinners: H. D. Piercy.
Opening General Meeting: H. G. Sloan.
President's Reception and Ball: H. L. Sanford.
Golf: J. B. Morgan.
Women's Entertainment: Mrs. C. L. Cummer.

ENTERTAINMENT

The Ohio State Medical Association and the Academy of Medicine of Cleveland are hosts to the convention and will maintain permanent information desks in the North Lobby of the Public Hall and the Lobby of the Hotel Carter, which is the headquarters for Women's Entertainment.

The Academy of Medicine will publish a special issue of its Bulletin for distribution to all members of the American Medical Association who register. It will contain a list of the entertainment features, together with descriptive material about points of interest in Cleveland and vicinity.

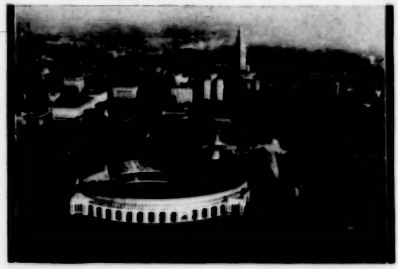
Medical Women's National Association

The Medical Women's National Association will hold its annual meeting in the Hotel Cleveland, June 10-12. Sessions will open Sunday afternoon at 2 o'clock and close with the annual banquet on Tuesday, June 12, at 6:30 p. m.

Breakfast meetings will be held during the week at Hotel Cleveland.

Left—The MUSEUM OF ART

Above—SEVERANCE HALL, THE HOME OF THE CLEVELAND ORCHESTRA



Left—AIR VIEW OF LAKE FRONT SHOWING THE MUNICIPAL STADIUM. THE TERMINAL TOWER GROUP IS IN THE BACKGROUND.

Opening General Meeting

The Opening General Meeting will take place on Tuesday evening, June 12, at 8 o'clock, in the Music Hall, Cleveland Public Auditorium.

President's Reception

The President of the American Medical Association will be honored with a reception and ball to be held Thursday evening, June 14, at 9 o'clock, in the ballroom of the Hotel Cleveland.

Dinner for General Officers and Delegates

The Ohio State Medical Association and the Academy of Medicine of Cleveland will be joint hosts on Monday evening, June 11, at 6:30, in the Union Club, where they will entertain the general officers and members of the House of Delegates of the American Medical Association with a dinner.

Medical Veterans

The Medical Veterans of the World War will be the guests of the Cleveland medical veterans on Wednesday evening, June 13, when they will be entertained with a smoker and buffet luncheon at Hotel Statler. A program of informal talks is being arranged.

"Bring-Your-Husband" Dinner

On Thursday evening, June 14, the annual "Bring-Your-Husband-Dinner" will be held at the Hotel Carter. This dinner, which is sponsored by the Women's Entertainment Committee of the Academy of Medicine and the Woman's Auxiliary of the American Medical Association, will take place prior to the President's Reception and Ball. Members attending the convention who are not accompanied by their wives are also urged to attend.

Alumni Dinners

Notice has been received of the following alumni dinners to be held during the week of the convention:

University of Toronto, Wednesday, June 13, 6:30 p. m., Hotel Carter.

University of Minnesota, Wednesday, June 13, 6:00 p. m., Hotel Carter.

University of Pennsylvania, Wednesday, June 13, 6:30 p. m., Hotel Carter.

Western Reserve University, Wednesday, June 13, 6:30 p. m., Hotel Carter.

Creighton University, Wednesday, June 13, 6:30 p. m., Hotel Statler.

Missouri Medical College, Tuesday, June 12, 6:30 p. m., Hotel Statler.

St. Louis University School of Medicine, Wednesday, June 13, 6:30 p. m., Hotel Statler.

Rush Medical College, Wednesday, June 13, 6:30 p. m., Hotel Statler.

Johns Hopkins Medical School, Wednesday, June 13.

Dates in some cases are tentative, and further information should be sought at the Academy of Medicine Information Desk at Public Hall.

Fraternity and Club Luncheons

The Alpha Kappa Kappa Fraternity will have its luncheon at the Hotel Hollenden, Wednesday, June 13, at 12:30 p. m.

The Alpha Mu Pi Omega fraternity luncheon will be held at the Hotel Cleveland, Wednesday noon, June 13.

Alumni of Phi Rho Sigma fraternity will meet for luncheon at 12:30 p. m., Wednesday, June 13, in the Showboat Room of the Hotel Hollenden. On the mornings of June 11, 12 and 13 the visiting Phi Rhos may register and secure information at a desk on the mezzanine floor of the Hotel Statler.

The Phi Delta Epsilon medical fraternity will hold a luncheon for its members who will attend the annual session in Cleveland in the Showboat Room of the Hollenden Hotel, Thursday noon.

Visiting members of the various national luncheon clubs will be welcome at the luncheons of the local clubs as follows:

Kiwanis Club: Hotel Cleveland, Thursday noon, June 14.
Rotary Club: Hotel Statler, Thursday noon, June 14.
Lions Club: Hotel Carter, Thursday noon, June 14.

Program for Entertainment of Women Guests

HEADQUARTERS, HOTEL CARTER

MONDAY, JUNE 11

7 p. m. Dinner in honor of the National Board of the Woman's Auxiliary, wives of officers and delegates of the American Medical Association. Women guests of the Association invited. Hotel Carter.

TUESDAY, JUNE 12

Luncheon, bridge and style show, Lake Shore Hotel.

WEDNESDAY, JUNE 13

8:15 p. m. Complimentary musicale and reception, Allen Memorial Medical Library.

THURSDAY, JUNE 14

Noon Luncheon. The Country Club, Lander Road.

Afternoon. Sight-seeing tour, including visit to garden at "Glenallen," home of Mr. and Mrs. Francis Fleury Prentiss.

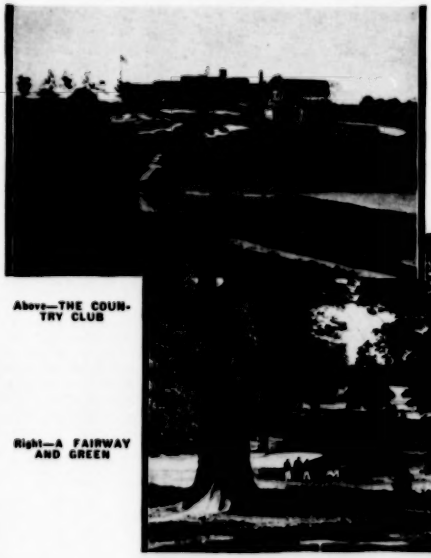
Evening. "Bring-Your-Husband Dinner," Hotel Carter.

FRIDAY, JUNE 15

Morning and Afternoon. Women's golf tournament, Westwood Country Club.

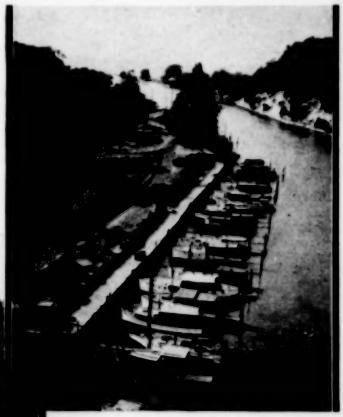
Woman's Auxiliary

Meetings of the Woman's Auxiliary of the American Medical Association are to be held at the Hotel Carter under the presidency of Mrs. James Blake of Hopkins, Minn.



Above—THE COUNTRY CLUB

Right—A FAIRWAY AND GREEN



Above—ROCKY ISLAND AND PART OF THE CLEVELAND YACHT CLUB'S FLEET

GOLF TOURNAMENT

The American Medical Golfing Association will hold its twentieth annual tournament at the Mayfield Country Club in Cleveland on Monday, June 11.

Thirty-six holes of golf will be played in competition for the fifty trophies and prizes in the eight events. The trophies include the Association Championship for thirty-six holes gross, the Association Handicap Championship for thirty-six holes net, the Choice Score Handicap Championship for thirty-six holes gross, the low gross Eighteen Hole Championship, the low net Eighteen Hole Handicap Championship, the Maturity Event limited to Fellows over 60 years of age, the Oldguard Championship limited to competition of past presidents, and the Kickers Handicap. The championship event has as its major prize the famous Will Walter Trophy, awarded since 1923 for low gross thirty-six holes. This trophy, designed by Edgar Millar and executed by the Cellini Shop, Evanston, Ill., symbolizes the evolution of medicine. The first handle depicts the age of primitive ignorance, with shaman witch doctor, spells and the invocation of nature gods to cure ailing mankind, from antiquity to 500 B. C. The second handle shows the age of Greek thinkers, bearing the serpents symbolic of Aesculapius, god of medicine—an age of thought and research, from 500 B. C. to 640 A. D. The third handle represents the age of medieval superstition from 640 A. D. to 1500 A. D., with an astrologer, the physician common to the dark ages. The fire of incantation rises behind the figure as he traces a cabalistic sign in the air.

The fourth handle depicts the age of modern medical research, from the Renaissance to modern time, with increasing light spreading from a figure symbolic of an enlarging vision. Winners since the cup was placed in competition have been Drs. E. A. Seaforth, San Francisco, 1923; George McKee, Pittsburgh, 1924; Homer Nicoll, Chicago, 1925; S. M. Hill, Dallas, Texas, 1926; George McKee again in 1927; Walter Shelden, Rochester, Minn., 1928; John Loudon, Yakima, Wash., 1929 and 1930; George McKee, 1931; S. M. Hill, 1932, and Mark Bach, Milwaukee, 1933. Other prizes and events will be announced at the first tee.

Dr. Homer K. Nicoll of Chicago is president and Dr. Charles Lukens of Toledo and Dr. John W. Powers of Milwaukee are vice presidents of the American Medical Golfing Association, which was organized in 1915 by Dr. Will Walter, Dr. Wendell Phillips and Dr. Gene Lewis, and which has a total membership of 1,100 representing every state in the Union. The living past presidents include Dr. Wendell Phillips of New York, Dr. Thomas Hubbard of Toledo, Dr. Fred Bailey of St. Louis, Dr. Edward Martin of Philadelphia, Dr. Robert Moss of San Antonio, Dr. Charlton Wallace of New York, Dr. Will Walter of Charlottesville, Va., Dr. James Eaves of San Francisco, Dr. D. Chester Brown of Danbury, Conn., Dr. Samuel Childs of Denver, Dr. W. D. Shelden of Rochester, Minn., Dr. Walter Schaller of San Francisco, Dr. Edwin Zabriskie of New York, Dr. Frank Kelley of Detroit and Dr. John Welsh Croskey of Philadelphia.

THE GARFIELD MEMORIAL

The Cleveland committee is under the chairmanship of Dr. John B. Morgan, 1301 Medical Arts Building, Cleveland, Ohio. He will be assisted by Drs. R. H. Birge, A. V. Boysen, E. F. Freedman, F. T. Gallagher, Secord Large, E. P. McNamee, J. J. Marek, Theodore Miller, U. V. Portmann and M. A. Thomas.

The Mayfield Country Club of Cleveland is described by Dr. Morgan as "probably the finest course in the district, and certainly one of the most interesting. Many championships have been held on this course," he says, "and I am sure the visiting doctors will be delighted with it in every sense of the word. This country club has a most beautiful club house."

APPLICATION FOR MEMBERSHIP

Membership in the A. M. G. A. is open to any male Fellow of the American Medical Association. Write the Executive Secretary, William J. Burns, 4421 Woodward Avenue, Detroit, for an application blank. Participants in the A. M. G. A. tournament are required to furnish their home club handicap, signed by the secretary. No handicap over 25 is allowed.

The twentieth tournament of the American Medical Golfing Association promises to be a gay affair, attended by some two hundred medical golfers from all parts of the United States.

PRELIMINARY PROGRAM OF THE SCIENTIFIC ASSEMBLY

PROGRAM OF THE OPENING GENERAL MEETING

Music Hall, Arena Floor, Cleveland Public Auditorium, Tuesday, June 12, 8 p. m.

Music.
Call to Order by the President, DEAN LEWIS.
Welcome to Cleveland:
HON. HARRY L. DAVIS, Mayor of Cleveland.
ALFRED A. JENKINS, President, Academy of Medicine of Cleveland.
CLYDE L. CUMMER, President, Ohio State Medical Association.
Address. HON. ROY J. BULKLEY, United States Senator from Ohio.
Music.
Introduction and Installation of PRESIDENT-ELECT WALTER L. BIERRING, Des Moines, Iowa.
Address. WALTER L. BIERRING.
Presentation of Medal to Retiring President, DEAN LEWIS.
J. H. J. UPHAM, Chairman of the Board of Trustees.
Music.

THE PROGRAMS OF THE SECTIONS

Outline of the Scientific Proceedings—The Preliminary Program and the Official Program

The following papers are announced to be read before the various sections. The order here is not necessarily the order that will be followed in the Official Program, nor is the list complete. The Official Program will be similar to the programs issued in previous years and will contain the final program of each section with abstracts of the papers, as well as lists of committees, program of the Opening General Meeting, list of entertainments, map of Cleveland, and other information. To prevent misunderstandings and protect the interest of advertisers, it is here announced that this Official Program will contain no advertisements. It is copyrighted by the American Medical Association and will not be distributed before the session. A copy will be given to each Fellow on registration.

SECTION ON PRACTICE OF MEDICINE

MEETS IN BALLROOM, FOURTH FLOOR, CLEVELAND PUBLIC AUDITORIUM

OFFICERS OF SECTION

Chairman—C. T. STONE, Galveston, Texas.
Vice Chairman—F. W. MADISON, Milwaukee.
Secretary—W. J. KERR, San Francisco.
Executive Committee—G. GILL RICHARDS, Salt Lake City; REGINALD FITZ, Boston; C. T. STONE, Galveston, Texas.

Wednesday, June 13—2 p. m.

The Cause of Death in Adult Pneumonia.
HARLOW BROOKS, New York.
Discussion to be opened by JAMES H. MEANS, Boston; L. J. MOORMAN, Oklahoma City, and MAXWELL FINLAND, Boston.
Congenital Polycystic Disease of the Lungs (Lantern Demonstration). HARRY G. WOOD, Rochester, Minn.
Discussion to be opened by L. J. MOORMAN, Oklahoma City.
The Treatment of Emphysema (Lantern Demonstration).
JONATHAN C. MEAKINS, Montreal, Canada.
The Frank Billings Lecture. JAMES B. HERRICK, Chicago.

Epidemic Encephalitis. RALPH A. KINSELLA, St. Louis.
Discussion to be opened by J. P. LEAKE, Washington, D. C.

A Review of Eighteen Months' Experience with Total Ablation of the Thyroid for Angina Pectoris and Congestive Failure (Lantern Demonstration).
HERRMANN L. BLUMGART and DAVID D. BERLIN, Boston.
Discussion to be opened by SAMUEL A. LEVINE and JAMES H. MEANS, Boston; R. R. SNOWDEN, Pittsburgh; WILLIAM B. PORTER, Richmond, Va.; W. O. THOMPSON, Chicago; GEORGE M. CURTIS, Columbus, Ohio, and EMANUEL LIBMAN, New York.

Thursday, June 14—2 p. m.

Recognition of Types of Arteriosclerosis by Oscillometry (Lantern Demonstration).
ALFRED FRIEDLANDER, Cincinnati.
Discussion to be opened by CARL J. WIGGERS, Cleveland, and JAMES P. O'HARE, Boston.

Diabetic Complications. LEA A. RIELY, Oklahoma City.
Discussion to be opened by PRISCILLA WHITE, Boston; S. EDWARD KING, New York; HENRY J. JOHN, Cleveland, and HENRY W. MEYERDING, Rochester, Minn.

The Relation of Dentistry to Medicine.
L. M. S. MINER, Boston.

General Measures in the Treatment of Chronic Arthritis.
ERNEST E. IRONS, Chicago.

Treatment of Arthritis with Drugs and Vaccines (Lantern Demonstration). RUSSELL L. CECIL, New York.

Orthopedic and Physical Therapeutic Treatment of Chronic Arthritis. LORING T. SWAIM, Boston.
Discussion on papers of DRS. IRONS, CECIL and SWAIM to be opened by WALTER BAUER, Boston; LINN J. BOYD, New York; W. PAUL HOLBROOK, Tucson, Ariz.; MAURICE F. LAUTMAN, Hot Springs, Ark.; S. C. WOLDENBERG and HEINRICH F. WOLF, New York, and WILLIAM J. KERR, San Francisco.

Friday, June 15—2 p. m.

Election of Officers

Treatment of Hemophilia (Lantern Demonstration).
HAROLD W. JONES and LEANDRO M. TOCANTINS, Philadelphia.

Treatment of Hemolytic Jaundice by Liver Extract (Lantern Demonstration).
EDWARD C. REIFENSTEIN and ELLERY G. ALLEN, Syracuse, N. Y.

The Occurrence and Treatment of Neurologic Changes in Pernicious Anemia (Lantern Demonstration).
CYRUS C. STURGIS and S. M. GOLDHAMER, Ann Arbor, Mich.
Discussion on papers of DRS. JONES, REIFENSTEIN and ALLEN, and STURGIS to be opened by ADOLPH SACHS, Omaha; WANN LANGSTON, Oklahoma City; V. P. SYDENSTRICKER, Augusta, Ga., and RUSSELL L. HADEN, Cleveland.

Chairman's Address. C. T. STONE, Galveston, Texas.

Prognosis in Arteriosclerotic Heart Disease (Lantern Demonstration). LOUIS E. VIKO, Salt Lake City.
Discussion to be opened by WALTER L. BIERRING, Des Moines, Iowa; R. WESLEY SCOTT, Cleveland, and WILL S. HORN, Fort Worth, Texas.

The Syndrome of Hypertonic and Atonic Colopathy (Lantern Demonstration). FRED H. KRUSE, San Francisco.
Discussion to be opened by LEWELLYS F. BARKER, Baltimore; WALTER L. PALMER, Chicago; ELMER L. EGGLESTON, Battle Creek, Mich., and WILLIAM LINTZ, Brooklyn.

SECTION ON SURGERY, GENERAL AND ABDOMINAL

MEETS IN MUSIC HALL, ARENA FLOOR, CLEVELAND PUBLIC AUDITORIUM

OFFICERS OF SECTION

Chairman—HAROLD BRUNN, San Francisco.
Vice Chairman—ROY D. MCCLURE, Detroit.
Secretary—HOWARD M. CLUTE, Boston.
Executive Committee—HUBERT A. ROYSTER, Raleigh, N. C.; FRED W. RANKIN, Lexington, Ky.; HAROLD BRUNN, San Francisco.

Wednesday, June 13—9 a. m.

Femoral Hernia: Operative Repair by Fascial Suture (Lantern Demonstration). R. L. PAYNE, Norfolk, Va.
Discussion to be opened by H. W. CAVE, New York, and F. W. BAILEY, St. Louis.

Contusions of the Heart (Lantern Demonstration).
CLAUDE S. BECK, Cleveland.
Discussion to be opened by R. L. SANDERS, Memphis, Tenn., and JOSEPH T. WEARN, Cleveland.

Surgical Treatment of Extensive Malignant Lesions of the Stomach (Lantern Demonstration).
WALTMAN WALTERS, Rochester, Minn.
Discussion to be opened by FRANK H. LAHEY, Boston, and GATEWOOD, Chicago.

The Treatment of Perforated "Peptic" Ulcers.
HUGH H. TROUT, Roanoke, Va.
Discussion to be opened by ROY D. MCCLURE, Detroit, and EDWARD J. DONOVAN, New York.

The Recognition and Treatment of Jejunal Ulceration (Lantern Demonstration).
ROSCOE R. GRAHAM, Toronto, Canada.
Discussion to be opened by DEAN LEWIS, Baltimore, and DONALD C. BALFOUR, Rochester, Minn.

The Surgical Treatment of Carcinoma of the Lungs and Bronchi (Lantern Demonstration).
WILLIAM F. RIENHOFF JR., Baltimore.
Discussion to be opened by EVARTS A. GRAHAM, St. Louis, and CARL A. HEDBLOM, Chicago.

Thursday, June 14—9 a. m.

Chairman's Address: Lung Abscess (Lantern Demonstration).
HAROLD BRUNN, San Francisco.

The Bearing of Certain Physiologic Facts on Gastro-Intestinal Surgery (Lantern Demonstration).
J. SHELTON HORSLEY, Richmond, Va.
Discussion to be opened by FRANK K. BOLAND, Atlanta, Ga., and GEORGE W. CRILE, Cleveland.

The Management of Perforated Appendicitis.
JOHN F. GILE and JOHN P. BOWLER, Hanover, N. H.

Treatment of Appendicitis Associated with Peritonitis (Lantern Demonstration). FRED A. COLLER, Ann Arbor, Mich.
Discussion on papers of DRS. GILE and BOWLER and DR. COLLER to be opened by E. STARR JUDD, Rochester, Minn.; ALTON OCHSNER, New Orleans, and LE GRAND GUERRY, Columbia, S. C.

Diagnosis and Treatment of Tumors of the Breast: Clinically Benign and Clinically Malignant as Based on Biopsy (Lantern Demonstration). J. C. Bloodgood, Baltimore.
Discussion to be opened by IRVIN ABELL, Louisville, Ky., and MAX CUTLER, Chicago.

Intestinal, Rectal and Bladder Complication Resulting from Prolonged Radium and X-Ray Irradiation for Malignant Conditions of the Pelvis: Surgical Treatment.
THOMAS E. JONES, Cleveland.
Discussion to be opened by FLOYD E. KEENE, Philadelphia, and GEORGE G. WARD, New York.

Friday, June 15—9 a. m.

Election of Officers

Alterations of Function in Biliary Tract Disease (Lantern Demonstration).
I. S. RAVDIN and C. G. JOHNSTON, Philadelphia.

Physiologic Principles to Be Considered in the Therapy of Biliary Tract Disease: The Physiology of the Gallbladder; Some Principles to Be Considered in Therapy (Lantern Demonstration). A. C. IVY, Chicago.

A Consideration of the Stoneless Gallbladder.
EVARTS A. GRAHAM, St. Louis.
Discussion on papers of DRS. RAVDIN and JOHNSTON, IVY and GRAHAM to be opened by URBAN MAES, New Orleans, and WALTMAN WALTERS, Rochester, Minn.

Carcinoma of Cecum: What Are the Chances for Cure (Lantern and Motion Picture Demonstration)?
C. F. DIXON, Rochester, Minn.
Discussion to be opened by JEROME M. LYNCH, New York, and T. M. JOYCE, Portland, Ore.

Surgical Treatment of Ulcerative Colitis (Lantern Demonstration). R. B. CATTELL, Boston.
Discussion to be opened by F. R. PETERSON, Iowa City, and ALFRED A. STRAUSS, Chicago.

Present Status of Tetanus, with Special Regard to Treatment (Lantern Demonstration).
RICHARD H. MILLER and HORATIO ROGERS, Boston.
Discussion to be opened by J. M. Wainwright, Scranton, Pa., and D. B. PFEIFFER, Philadelphia.

SECTION ON OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY

MEETS IN MUSIC HALL, ARENA FLOOR, CLEVELAND PUBLIC AUDITORIUM

OFFICERS OF SECTION

Chairman—JOSEPH B. DE LEE, Chicago.
Vice Chairman—PAUL TITUS, Pittsburgh.
Secretary—JAMES R. MCCORD, Atlanta, Ga.
Executive Committee—FRED L. ADAIR, Chicago; BARTON COOKE HIRST, Philadelphia; JOSEPH B. DE LEE, Chicago.

Wednesday, June 13—2 p. m.

SYMPOSIUM ON MODERN INDICATIONS FOR THERAPEUTIC ABORTION

Neuropsychiatry. CLARENCE O. CHENEY, New York.
Ophthalmology (Lantern Demonstration).
HENRY P. WAGENER, Rochester, Minn.
Cardiology. HAROLD E. B. PARDEE, New York.
Nephrology (Lantern Demonstration).
W. W. HERRICK, New York.
Pulmonology (Lantern Demonstration).
F. M. POTTENGER, Monrovia, Calif.
Discussion on paper of DR. CHENEY to be opened by H. DOUGLAS SINGER, Chicago; on paper of DR. WAGENER by ARTHUR J. BEDELL, Albany, N. Y.; on paper of DR. PARDEE by BURTON E. HAMILTON, Boston; on paper of DR. HERRICK by ROBERT D. MUSSEY, Rochester, Minn., and on paper of DR. POTTENGER by FRED L. ADAIR, Chicago. General discussion to be opened by FREDERICK J. TAUSSIG, St. Louis.

Thursday, June 14—2 p. m.

The Advantages of Paraldehyde as a Basic Amnesic Agent in Obstetrics (Lantern Demonstration).
R. A. BARTHOLOMEW, Atlanta, Ga.
Discussion to be opened by HAROLD H. ROSENFIELD, Boston.

Practical Measures in the Prevention and Treatment of Puerperal Sepsis (Lantern Demonstration).
B. P. WATSON, New York.
Discussion to be opened by J. C. LITZENBERG, Minneapolis.

Chairman's Address. JOSEPH B. DE LEE, Chicago.

The Conservative Treatment of Eclampsia (Lantern Demonstration). LYLE G. MCNEILE, Los Angeles.

Pregnancy Changes in the Vaginal Epithelium in Relation to the Vaginal Cycle (Lantern Demonstration).
M. EDWARD DAVIS, Chicago.
Discussion to be opened by CARL G. HARTMAN, Baltimore.

Friday, June 15—2 p. m.

Election of Officers

Electrocoagulation of Cervical Erosions and Endocervicitis in the Late Puerperium (Lantern Demonstration).
RALPH L. BARRETT, New York.
Discussion to be opened by HAROLD A. MILLER, Pittsburgh.

Factors Predisposing to Carcinoma of the Uterus (Lantern Demonstration). J. I. HOFBAUER, Cincinnati.
Discussion to be opened by J. P. GREENHILL, Chicago.

Comments on One Hundred Cases of Ectopic Pregnancy Encountered in Private Practice (Lantern Demonstration). CHESTER M. ECHOLS, Milwaukee.
Discussion to be opened by JOSEPH D. HEIMAN, Cincinnati.

Early Histologic Diagnosis of Carcinoma of the Uterine Cervix (Lantern Demonstration). HENRY SCHMITZ, Chicago.
Discussion to be opened by EMIL NOVAK, Baltimore.

Demonstration of the Endometrium in Relief with Thorium Dioxide Sol (Lantern Demonstration).
J. DUANE MILLER, Grand Rapids, Mich.
Discussion to be opened by HARVEY B. MATTHEWS, Brooklyn.

SECTION ON OPHTHALMOLOGY

MEETS IN LITTLE THEATER, ARENA FLOOR, CLEVELAND PUBLIC AUDITORIUM

OFFICERS OF SECTION

Chairman—WILLIAM C. FINNOFF, Denver.
Vice Chairman—FRANK E. BURCH, St. Paul.
Secretary—PARKER HEATH, Detroit.
Executive Committee—HARRY FRIEDENWALD, Baltimore; FREDERICK H. VERHOEFF, Boston; WILLIAM C. FINNOFF, Denver.

Wednesday, June 13—9 a. m.

Chairman's Address. WILLIAM C. FINNOFF, Denver.

The Ocular Lesions Resulting from Thallium Acetate Poisoning as Determined by Experimental Research (Lantern Demonstration). CHARLES M. SWAB, Omaha.

SYMPOSIUM ON TREATMENT OF RETINAL DETACHMENT BY ELECTRICAL COAGULATION

Clinical Observations (Lantern Demonstration).
MARK J. SCHOENBERG, New York.

A New Technic and Case Reports (Lantern Demonstration).
CLIFFORD B. WALKER, Los Angeles.

Blepharochalasis (Lantern Demonstration).
BENNETT Y. ALVIS, St. Louis.

Diabetic Cataract (Lantern Demonstration).
C. S. O'BRIEN, Iowa City.

Thursday, June 14—9 a. m.

Anterior Lenticonus (Lantern Demonstration).
BENJAMIN RONES, Baltimore.

Transcranial Approach for Removal of Cavernous Hemangioma of the Orbit (Lantern Demonstration).
A. W. ADSON and WILLIAM L. BENEDICT, Rochester, Minn.

Observations of Four Thousand Optic Foramina in Human Skulls of Known Origin (Lantern Demonstration).
JOHN E. L. KEYES, Youngstown, Ohio.

Unilateral Central and Annular Scotoma Produced by Fracture of the Optic Canal: Report of Two Cases (Lantern Demonstration). WALTER I. LILLIE, Philadelphia.

Some Factors Concerned in the Correction of Aphakia.
ALFRED COWAN, Philadelphia.

Pulsating Exophthalmos Due to Internal Carotid Jugular Aneurysm (Lantern Demonstration).
T. L. TERRY, Boston.

Exhibition of Instruments and Appliances

Friday, June 15—9 a. m.

Election of Officers

Bacteriologic and Immunologic Considerations of Chronic Uveitis. ALBERT L. BROWN, Cincinnati.

SYMPOSIUM ON STRABISMUS

Practical Details in the Orthoptic Treatment of Strabismus (Lantern Demonstration). GEORGE P. GUIBOR, Chicago.

Routine Muscle Examination: Its Practical Application (Lantern Demonstration).
JAMES WATSON WHITE, New York.

Etiologic Diagnosis of Conjunctivitis (Lantern Demonstration). PHILLIPS THYGESON, Iowa City.

Occurrence of Malignant Conditions of the Eyeball Following Trauma (Lantern Demonstration).
EDWARD STIEREN, Pittsburgh.

SECTION ON LARYNGOLOGY, OTOLOGY AND RHINOLOGY

MEETS IN LITTLE THEATER, ARENA FLOOR, CLEVELAND PUBLIC AUDITORIUM

OFFICERS OF SECTION

Chairman—WILLIAM P. WHERRY, Omaha.
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Secretary—JOHN J. SHEA, Memphis, Tenn.
Executive Committee—GABRIEL TUCKER, Philadelphia; HARRIS P. MOSHER, Boston; WILLIAM P. WHERRY, Omaha.

Wednesday, June 13—2 p. m.

Chairman's Address (Lantern Demonstration).
WILLIAM P. WHERRY, Omaha.

The Tonsils, Their Function and Indications for Their Removal (Lantern Demonstration). L. W. DEAN, St. Louis.

The Structure of the Secondary Nodule of the Tonsil (Lantern Demonstration). FRANK J. NOVAK JR., Chicago.

The Use of Reconstructive Surgery in Certain Types of Deformities of the Face (Lantern Demonstration).
GORDON B. NEW, Rochester, Minn.

The Importance of Allergy in the Etiology and Treatment of Nasal Mucous Polyps (Lantern Demonstration).
R. A. KERN and H. P. SCHENCK, Philadelphia.

An Attempt to Correlate the Various Theories of Vasomotor Disturbances of the Nasal and Bronchial Tracts.
HAROLD G. TOBEY, Boston.

Thursday, June 14—2 p. m.

Agranulocytic Angina. ROBERT F. RIDPATH, Philadelphia.

X-Ray Changes in the Petrous Portion of the Temporal Bone Without Clinical Manifestations (Lantern Demonstration).
GEORGE M. COATES, MATTHEW S. ERSNER and DAVID MYERS, Philadelphia.

Practical Points in the Radical Mastoid Operation (Lantern Demonstration). CLARENCE H. SMITH, New York.

Changes in the Lysozyme Content of the Nasal Secretion During Colds. ANDERSON C. HILDING, Duluth, Minn.

Experimental Studies in Vascular Repair: A Report of Two Hundred Experimental Studies (Lantern and Motion Picture Demonstration).
O. JASON DIXON, Kansas City, Mo.

Diagnostic Factors Concerning Herpes Zoster Oticus.
RALPH A. FENTON, Portland, Ore.

Friday, June 15—2 p. m.

Election of Officers

Hearing Reclamation and Preservation in the Moderately Deafened Child. Management and Treatment Based on Ten Years of Clinical and Laboratory Research (Lantern Demonstration). EDMUND P. FOWLER, New York.

Prenatal Medication as a Possible Etiologic Factor of Deafness in the New-Born.
H. MARSHALL TAYLOR, Jacksonville, Fla.

Conservative Surgical Treatment of Hypertrophic Rhinitis (Lantern Demonstration).
HOWARD V. DUTROW, Dayton, Ohio.

The Association of Middle Ear Infection with Sinus Disease (Lantern Demonstration).
M. M. CULLOM, Nashville, Tenn.

An X-Ray Study of the Maxillary Antrum Before and After Operation (Lantern Demonstration).
EDWARD KING, Cincinnati.

New Adaptation of X-Ray Prints and Slides Giving Stereoscopic Effect. WALTER H. THEOBALD, Chicago.

SECTION ON PEDIATRICS

MEETS IN BALLROOM, FOURTH FLOOR, CLEVELAND PUBLIC AUDITORIUM

OFFICERS OF SECTION

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Executive Committee—JAY I. DURAND, Seattle; FREDERIC W. SCHLUTZ, Chicago; ALFRED A. WALKER, Birmingham, Ala.

Wednesday, June 13—9 a. m.

Further Studies on Tungsten Filament Radiation (Dual Purpose Lighting) (Lantern and Motion Picture Demonstration).
HENRY J. GERSTENBERGER, A. J. HORESH, J. D. NOURSE and A. L. VAN HORN, Cleveland.
Discussion to be opened by A. GRAEME MITCHELL, Cincinnati, and HUGH J. LESLIE, Cleveland.

The Value of the Calmette Vaccination in Prevention of Tuberculosis in Childhood (Lantern Demonstration).
ARVID WALLGREN, Göteborg, Sweden.

The Effect of Initial Tuberculous Infection on Subsequent Tuberculous Lesions (Lantern Demonstration).
J. A. MYERS, Minneapolis.
Discussion to be opened by HORTON R. CASPARIS, Nashville, Tenn., and W. AMBROSE MCGEE, Richmond, Va.

The Application of Determinations of Fetal Size in Utero to the Problem of Reducing the Premature Infant Mortality (Lantern Demonstration).
STEWART H. CLIFFORD, Boston.
Discussion to be opened by FRED L. ADAIR and JULIUS H. HESS, Chicago.

A Study of the Influence of Breast and Artificial Feeding on the Morbidity and Mortality of Twenty Thousand Infants (Lantern Demonstration).
CLIFFORD G. GRULEE and HEYWORTH N. SANFORD, Chicago, and PAUL H. HERRON, Spokane, Wash.
Discussion to be opened by LAURENCE R. DEBUYS, New Orleans.

The Pathology of Pneumonia in Infancy (Lantern Demonstration).
CHARLES HENDEE SMITH, IRVING GRAEF and ELIZABETH H. T. ANDREWS, New York.
Discussion to be opened by FRANK W. KONZELMANN, Philadelphia, and KARL E. KASSOWITZ, Milwaukee.

Thursday, June 14—9 a. m.

Chronic Atopic Eczema (Neurodermatitis) in Childhood.
LEWIS W. HILL, Boston.
Discussion to be opened by MARION B. SULZBERGER, New York, and J. VICTOR GREENEBAUM, Cincinnati.

Chairman's Address: One Dose Alum Toxoid in Diphtheria Immunization.
ALFRED A. WALKER, Birmingham, Ala.

Factors That Influence Rheumatic Disease in Childhood (Lantern Demonstration).
ALBERT D. KAISER, Rochester, N. Y.
Discussion to be opened by HUGH MCCULLOCH, St. Louis, and ALBERT J. BELL, Cincinnati.

Therapeutic Results with the Pituitary Growth Hormone (Lantern Demonstration).
ROBERT L. SCHAEFER, Detroit.
Discussion to be opened by ROY G. HOSKINS, Boston.

The Problem of Accidental Poisoning in Childhood (Lantern Demonstration). JOHN AIKMAN, Rochester, N. Y.
Discussion to be opened by S. W. CLAUSEN, Rochester, N. Y., and C. W. WYCKOFF, Cleveland.

Diagnosis and Treatment of Lung Abscess in Children (Lantern Demonstration). DAVID T. SMITH, Durham, N. C.
Discussion to be opened by LOUIS H. CLERF, Philadelphia, and J. W. EPSTEIN, Cleveland.

Friday, June 15—9 a. m.

Election of Officers

Theory and Practice of Parenteral Fluid Administration (Lantern Demonstration). ALEXIS F. HARTMAN, St. Louis.
Discussion to be opened by F. W. SCHLUTZ, Chicago, and ARTHUR G. HELMICK, Columbus, Ohio.

A Study of Vaccination in Five Hundred New-Born Infants (Lantern Demonstration).
H. H. DONNALLY, Washington, D. C.
Discussion to be opened by J. A. DOULL, Cleveland.

The Immunization of School Children Against Whooping Cough (Lantern Demonstration).
J. M. FRAWLEY, Fresno, Calif.
Discussion to be opened by LOUIS W. SAUER, Evanston, Ill., and H. F. HELMHOLZ, Rochester, Minn.

Antitoxin vs. No Antitoxin in Scarlet Fever (Lantern Demonstration).
JAMES E. BOWMAN and P. F. LUCCHESI, Philadelphia.
Discussion to be opened by JOHN A. TOOMEY, Cleveland.

The Secondary Case of Scarlet Fever (Lantern Demonstration).
ARCHIBALD L. HOYNE and JOHN HAYS BAILEY, Chicago.
Discussion to be opened by JOHN A. TOOMEY, Cleveland, and D. L. RICHARDSON, Providence, R. I.

SECTION ON PHARMACOLOGY AND THERAPEUTICS

MEETS IN SOUTH HALL C, FOURTH FLOOR, CLEVELAND PUBLIC AUDITORIUM

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Executive Committee—R. L. LEVY, New York; E. M. K. GEILING, Baltimore; JOHN H. MUSSER, New Orleans.

Wednesday, June 13—9 a. m.

Clinical Experiences with Thevetin, a Cardiac Glucoside (Lantern Demonstration).
HARRY L. ARNOLD, Honolulu, T. H.; WILLIAM S. MIDDLETON, Madison, Wis., and K. K. CHEN, Indianapolis.
Discussion to be opened by R. WESLEY SCOTT, Cleveland.

Effects of Tissue Extracts on Muscle Pain of Ischemic Origin (Lantern Demonstration).
NELSON W. BARKER and GRACE M. ROTH, Rochester, Minn.
Discussion to be opened by E. V. ALLEN, Rochester, Minn., and WALLACE S. DUNCAN, Cleveland.

Oxygen in the Treatment of Acute Coronary Occlusion.
ALVAN L. BARACH and ROBERT L. LEVY, New York.
Discussion to be opened by WALTER M. BOOTHBY, Rochester, Minn., and A. CARLTON ERNSTENE, Cleveland.

Studies on the Thyrotropic Hormone of the Anterior Pituitary (Lantern Demonstration).
JAMES B. COLLIP and E. M. ANDERSON, Montreal, Canada.

Action of Iodine in Thyrotoxicosis, with Special Reference to Refractoriness (Lantern Demonstration).
JAMES H. MEANS and JACOB LERMAN, Boston.

Pharmacology of the Thyroid in Man (Lantern Demonstration).
W. O. Thompson, Chicago.
Discussion on papers of DRS. COLLIP and ANDERSON, MEANS and LERMAN and DR. THOMPSON to be opened by GEORGE W. CRILE, Cleveland; ANTON J. CARLSON, Chicago; HERRMANN L. BLUMGART, Boston; A. C. IVY, Chicago; GEORGE M. CURTIS, Columbus, Ohio, and E. C. KENDALL, Rochester, Minn.

Thursday, June 14—9 a. m.

The Differential Diagnosis and Therapeutic Rationale of Leukopenic States (Lantern Demonstration).
CHARLES A. DOAN, Columbus, Ohio.
Discussion to be opened by ROY R. KRACKE, Emory University, Ga., and E. B. KRUMBHAAR, Philadelphia.

Hemoglobin and Plasma Protein Regeneration as Influenced by Amino Acids and Proteins in Diet (Lantern Demonstration). GEORGE H. WHIPPLE, Rochester, N. Y.

The Diagnosis and Treatment of the Iron Deficiency Anemias (Lantern Demonstration).
FRANK H. BETHELL, Ann Arbor, Mich.

An Assay of Various Extracts of Liver for Intramuscular Use (Lantern Demonstration).
WILLIAM DAMESHEK and WILLIAM B. CASTLE, Boston.
Discussion on papers of DRS. WHIPPLE, BETHELL, and DAMESHEK and CASTLE to be opened by RAPHAEL ISAACS, Ann Arbor, Mich.; L. G. ZERFAS, Indianapolis; GEORGE R. MINOT, Boston, and CYRUS C. STURGIS, Ann Arbor, Mich.

Chairman's Address. JOHN H. MUSSER, New Orleans.

Treatment of the Common Cold (Lantern Demonstration).
H. S. Diehl, Minneapolis.
Discussion to be opened by GERALD S. SHIBLEY, Cleveland; K. K. CHEN, Indianapolis, and H. H. FELLOWS, New York.

Friday, June 15—9 a. m.

Election of Officers

A Study of the Effect of Caffeine on Rabbits (Lantern Demonstration).
C. GLENVILLE GIDDINGS JR. and E. L. BISHOP, Atlanta, Ga.
Discussion to be opened by E. W. EDMUNDS, Ann Arbor, Mich.

The Relief of Menopause Symptoms by Follicular Hormone Therapy (Lantern Demonstration).
E. L. SEVRINGHAUS, Madison, Wis.
Discussion to be opened by EMIL NOVAK, Baltimore; J. P. PRATT, Detroit, and E. P. MCCULLAGH, Cleveland.

Studies of Morphine Substitutes (Lantern Demonstration).
E. W. EDMUNDS and NATHAN B. EDDY, Ann Arbor, Mich.

The Use of Dihydromorphinon Hydrochloride in the Pain of Cancer (Lantern Demonstration).
C. MALONE STROUD, St. Louis.
Discussion on papers of DRS. EDMUNDS and EDDY and DR. STROUD to be opened by TORALD SOLLMANN, Cleveland; WALTER C. ALVAREZ, Rochester, Minn.; C. K. HIMMELSBACH, Fort Leavenworth, Kan., and NORMAN A. DAVID, Morgantown, W. Va.

The Rôle of Hypercalcemia in the Presence of the Tuberculin Reaction in Experimental Tuberculosis (Lantern Demonstration). EUGENE DE SAVITSCH, Chicago.
Discussion to be opened by HENRY WILLIS, Northville, Mich.

The Therapeutics of the Intravenous Drip (Lantern Demonstration).
HAROLD T. HYMAN and A. S. W. TOUROFF, New York.
Discussion to be opened by T. G. ORR, Kansas City, Mo.; PAUL TITUS, Pittsburgh, and ROBERT KAPSINOW, Lafayette, La.

SECTION ON PATHOLOGY AND PHYSIOLOGY

MEETS IN SOUTH HALL C, FOURTH FLOOR, CLEVELAND PUBLIC AUDITORIUM

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Executive Committee—J. H. BLACK, Dallas, Texas; CLYDE BROOKS, New Orleans; WILLIAM CARPENTER MACCARTY, Rochester, Minn.

Wednesday, June 13—2 p. m.

Giant Cell Tumors: Their Pathology and Possible Etiology (Lantern Demonstration).
CLAUDE MOORE, Washington, D. C.

Hyperproteinemia, Autohemo-Agglutination and Abnormal Bleeding in Multiple Myeloma (Lantern Demonstration).
ALVIN G. FOORD, Pasadena, Calif.

Is Hodgkin's Disease a Neoplasm or Due to Infection (Lantern Demonstration)? E. B. KRUMBHAAR, Philadelphia.

Chairman's Address: The Cancer Problem Today (Lantern Demonstration).
WILLIAM CARPENTER MACCARTY, Rochester, Minn.

The Problems of Radiosensitivity of Tumors (Lantern Demonstration). MAX CUTLER, Chicago.

Hypernephroid Tumors of the Kidney (Lantern Demonstration).
EUGENE R. WHITMORE, Washington, D. C.

The Pathology of Heart Disease in Veterans.
PHILIP MATZ, Washington, D. C.

Thursday, June 14—2 p. m.

Specific Viable Vaccines in Tuberculosis (Lantern Demonstration). H. J. CORPER, Denver.

The Significance of Mixed Infections in Pneumonia (Lantern Demonstration). MAXWELL FINLAND, Boston.

Tissue Reactions in Immunity: Some Clinical Implications (Lantern Demonstration).
REUBEN L. KAHN, Ann Arbor, Mich.

Normal Hematologic Standards (Lantern Demonstration).
EDWIN E. OSGOOD, Portland, Ore.

The Origin of the White Blood Cells (Lantern Demonstration).
B. K. Wiseman, Columbus, Ohio.
Discussion to be opened by CHARLES A. DOAN, Columbus, Ohio.

The Spleen in Sickle Cell Anemia (Lantern Demonstration).
L. W. Diggs, Memphis, Tenn.

A Study of One Hundred Cases of Jaundice (Lantern Demonstration). LEON SCHIFF, Cincinnati.

Friday, June 15—9 a. m.

Election of Officers

The Metabolism of Levulose: VI. The Influence of Gonadal Function on Tolerance (Lantern Demonstration).
ALLAN WINTER ROWE, Boston.

Sodium Ferrocyanide as a Clinical Test of Glomerular Efficiency (Lantern Demonstration).
EDWARD J. STIEGLITZ and ALVA A. KNIGHT, Chicago.
Discussion to be opened by NATHAN S. DAVIS III.

Some Physiologic Changes Occurring During Hyperpyrexia Induced by Physical Means (Lantern Demonstration).
WILLIAM BIERMAN, New York.

The Functions of a Full Time Pathologist (Lantern Demonstration). NICHOLAS M. ALTER, Jersey City, N. J.

Obtaining Permission for Autopsies (Lantern Demonstration).
MARGARET WARWICK, Buffalo.

SECTION ON NERVOUS AND MENTAL DISEASES

MEETS IN SOUTH HALL A, SECOND FLOOR, CLEVELAND PUBLIC AUDITORIUM

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Executive Committee—FRANKLIN G. EBAUGH, Denver; GEORGE B. HASSIN, Chicago; HENRY W. WOLTMAN, Rochester, Minn.

Wednesday, June 13—9 a. m.

Trauma and the Nervous System, with Special Reference to Head Injuries and a Classification of Posttraumatic Syndromes. I. S. WECHSLER, New York.
Discussion to be opened by N. W. WINKELMAN, Philadelphia, and GEORGE B. HASSIN, Chicago.

Spastic Paraplegia: Cases Illustrating the Common Etiologic Factors (Lantern Demonstration).
N. W. WINKELMAN, Philadelphia, and JOHN L. ECKEL, Buffalo.
Discussion to be opened by I. S. WECHSLER, New York.

The Neurologic Manifestations of Hyperinsulinism and Other Hypoglycemic States (Lantern Demonstration).
EDWARD H. RYNEARSON and FREDERICK P. MOERSCH, Rochester, Minn.
Discussion to be opened by I. S. WECHSLER, New York, and GEORGE W. HALL, Chicago.

The Diagnosis of Cerebral Neoplasms in the Absence of Generalized Intracranial Pressure Phenomena (Lantern Demonstration).
A. E. BENNETT and J. J. KEEGAN, Omaha.
Discussion to be opened by ALFRED W. ADSON, Rochester, Minn., and LLOYD H. ZIEGLER, Albany, N. Y.

The Diagnosis and Surgical Treatment of Chordomas of the Basilar Plate (Lantern Demonstration).
WILLIAM P. VAN WAGENEN, Rochester, N. Y.
Discussion to be opened by JOHN L. ECKEL, Buffalo, and W. JAMES GARDNER, Cleveland.

Frontal Lobe Tumors: Clinical Observations in a Verified Series (Lantern Demonstration).
H. C. VORIS, Rochester, Minn.
Discussion to be opened by ALFRED W. ADSON, Rochester, Minn., and F. J. GERTY, Chicago.

Thursday, June 14—9 a. m.

Chairman's Address (Lantern Demonstration).
HENRY W. WOLTMAN, Rochester, Minn.

SYMPOSIUM ON THE FUNCTIONS OF THE CEREBRAL CORTEX

FRONTAL LOBES

The Relation of Cyto-Architecture of the Frontal Lobes of Primates to Functional Activity (Lantern Demonstration). PAUL C. BUCY, Chicago.

An Analysis of the Syndromes of the Motor and Premotor Areas.
J. F. FULTON, New Haven, Conn., and HENRY R. VIETS, Boston.

Functions of the Frontal Association Areas in Primates (Lantern Demonstration).
C. F. JACOBSEN, New Haven, Conn.
Discussion on papers of DR. BUCY, DRS. FULTON and VIETS and DR. JACOBSEN to be opened by I. S. WECHSLER, New York, and JOHN L. ECKEL, Buffalo.

AUTONOMIC REPRESENTATION IN THE CORTEX

Vasomotor Disturbances Resulting from Cortical Lesions (Lantern Demonstration).
MARGARET A. KENNARD, New Haven, Conn.

The Influence of the Cortex on Gastro-Intestinal Movements (Lantern Demonstration).
JAMES W. WATTS, Philadelphia.
Discussion on papers of DRS. KENNARD and WATTS to be opened by JOHN PAUL QUIGLEY, Cleveland, and PAUL C. BUCY, Chicago.

OCCIPITAL LOBES

Structure of the Retina and Its Cerebral Representation in Primates and in Man (Lantern Demonstration).
STEPHEN POLJAK, Chicago.

A Phylogenic Interpretation of the Functions of the Visual Cortex (Lantern Demonstration).
DONALD MARQUIS, New Haven, Conn.
Discussion on papers of DRS. POLJAK and MARQUIS to be opened by FRANKLIN JELSMA, Louisville, Ky., and THOMAS J. HELDT, Detroit.

Friday, June 15—9 a. m.

Election of Officers

Multiple Sclerosis: Cervicodorsal Sympathectomy as a Relief Measure (Lantern Demonstration).
FREDERICK S. WETHERELL, Syracuse, N. Y.
Discussion to be opened by NOBLE R. CHAMBERS, Syracuse, N. Y.

Spinal Drainage of Repeated Lumbar Punctures in Traumatic Lesions of the Central Nervous System.
WILLIAM SHARPE, New York.
Discussion to be opened by FOSTER KENNEDY, New York, and TEMPLE S. FAY, Philadelphia.

Muscular Dystrophy, Muscular Atrophy and Myasthenia Gravis: Review of Clinical and Biochemical Studies of the Effects of Amino Acid (Lantern Demonstration).
CARLO J. TRIPOLI, WILLIAM M. MCCORD, JEROME E. ANDES and HOWARD H. BEARD, New Orleans.
Discussion to be opened by WALTER M. BOOTHBY, Rochester, Minn., and HANS H. REESE, Madison, Wis.

Physiologic and Psychologic Phenomena Produced by a Prolonged Vigil (Lantern Demonstration).
SIEGFRIED E. KATZ and CARNEY LANDIS, New York.
Discussion to be opened by CLARENCE O. CHENEY, New York, and LLOYD H. ZIEGLER, Albany, N. Y.

The Treatment of Psychoneuroses in General Practice.
LAUREN H. SMITH, Philadelphia.
Discussion to be opened by JOSEPH YASKIN, Philadelphia, and ALAN D. FINLAYSON, Cleveland.

Modern State Hospital Treatment of Mental Diseases.
CHARLES F. READ and JOHN T. NERANCY, Elgin, Ill.
Discussion to be opened by CLARENCE O. CHENEY, New York; GEORGE B. HASSIN, Chicago, and FRANKLIN G. EBAUGH, Denver.

SECTION ON DERMATOLOGY AND SYPHILOLOGY

MEETS IN CLUB ROOM B, THIRD FLOOR, CLEVELAND PUBLIC AUDITORIUM

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Executive Committee—GEORGE M. MACKEE, New York; FRANCIS EUGENE SENEAR, Chicago; C. GUY LANE, Boston.

Wednesday, June 13—9 a. m.

Chairman's Address (Lantern Demonstration).
C. GUY LANE, Boston.

Necrobiosis Lipoidica Diabeticorum (Lantern Demonstration).
ERWIN P. ZEISLER and MARCUS R. CARO, Chicago.

Clinical Mutations in Lymphoblastomas (Lantern Demonstration). FRANK STILES JR., Ann Arbor, Mich.

Is Spiegler-Fendt Sarcoid a Clinical or Histologic Entity?
GEORGE M. LEWIS, New York.

Studies on the Specificity of a Streptococcus Isolated from Cases of Pemphigus: Preliminary Report (Lantern Demonstration). ASHTON L. WELSH, Rochester, Minn.

Streptococcic Infections Simulating Ringworm of the Hands and Feet (Lantern Demonstration).
JAMES HERBERT MITCHELL, Chicago.

The Roentgen Unit in Dermatology (Lantern Demonstration).
GEORGE M. MACKEE and ANTHONY C. CIPOLLARO, New York.

The Rôle of High Frequency Currents in the Performance and Histologic Interpretation of Biopsy Samples (Lantern Demonstration).
FRED D. WEIDMAN and JACQUES P. GUEQUIERRE, Philadelphia.

Thursday, June 14—9 a. m.

Urinary Proteose in Eczema (Lantern Demonstration).
THEODORE CORNBLEET and M. A. KAPLAN, Chicago.

The Present Status of the Specific Diagnosis and Treatment of the Allergic Diseases of the Skin.
ARTHUR F. COCA, New York.

Ragweed Dermatitis (Lantern Demonstration).
LOUIS A. BRUNSTING and C. R. ANDERSON, Rochester, Minn.

Some Observations on Light Sensitive Dermatoses (Lantern Demonstration).
NELSON PAUL ANDERSON and SAMUEL AYRES JR., Los Angeles.

Acneform Eruptions of the Face: Etiologic Importance of Specific Foods (Lantern Demonstration).
CLEVELAND J. WHITE, Chicago.

Early Cutaneous Carcinoma (Lantern Demonstration).
RICHARD L. SUTTON JR., Kansas City, Mo.

Dioxyanthranol 1-8 as a Substitute for Chrysarobin.
HERMAN BEERMAN, GEORGE V. KULCHAR, DONALD M. PILLSBURY and JOHN H. STOKES, Philadelphia.

Verruca Peruana as Observed in Peru (Lantern Demonstration).
HOWARD FOX, New York.

Friday, June 15—9 a. m.

Election of Officers

The Treatment of Hemorrhagic Symptoms with Snake Venom (Lantern Demonstration).
SAMUEL M. PECK, New York.

The Frei Test for Lymphogranuloma Inguinale: Recovery of the Antigen from a Pustular Reaction (Lantern Demonstration).
MAURICE J. STRAUSS and MARION E. HOWARD, New Haven, Conn.

Organic Luetin. Its Value in Diagnosis and Treatment of Syphilis: A Study of Five Hundred Cases.
LESLIE P. BARKER, New York.

The Treatment of Syphilis with Hyperpyrexia (Lantern Demonstration).
NORMAN N. EPSTEIN and MAURICE COHEN, San Francisco.

Sulpharsphenamine Bismuth (Bismarsen) in the Treatment of Congenital Syphilis: A Five Years Appraisal (Lantern Demonstration).
STANLEY O. CHAMBERS and GEORGE F. KOETTER, Los Angeles.

Arsphenamine Sensitization Dermatitis: An Attempt at Sensitizing Patients by Intradermal Neoarsphenamine (Lantern Demonstration).
ARTHUR G. SCHOCH, Dallas, Texas.

The Application of the Intravenous Drip Method of Chemotherapy as Illustrated by Massive Doses of Neoarsphenamine in the Treatment of Early Syphilis (Lantern Demonstration).
LOUIS CHARGIN, New York.

SECTION ON PREVENTIVE AND INDUSTRIAL MEDICINE AND PUBLIC HEALTH

MEETS IN SOUTH HALL B, THIRD FLOOR, CLEVELAND PUBLIC AUDITORIUM

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Executive Committee—J. E. GORDON, Detroit; J. N. BAKER, Montgomery, Ala.; WILSON G. SMILLIE, Boston.

Wednesday, June 13—2 p. m.

SYMPOSIUM ON LEAD POISONING

Chairman's Address (Lantern Demonstration).
WILSON G. SMILLIE, Boston.

Epidemiology of Lead Poisoning. A. J. LANZA, New York.

Chemistry of Lead in the Body (Lantern Demonstration).
JOSEPH C. AUB, Boston.

Normal Absorption and Excretion of Lead (Lantern Demonstration).
ROBERT A. KEHOE, Cincinnati.

Symptoms in Early Stages of Lead Poisoning.
R. R. JONES, Washington, D. C.

Control of Lead Poisoning in the Worker (Lantern Demonstration).
ELSTON L. BELKNAP, Milwaukee.

Recent Progress in the Treatment of Plumbism (Lantern Demonstration).
IRVING GRAY, Brooklyn.

Thursday, June 14—2 p. m.

PUBLIC HEALTH

The Relation of Postgraduate Medical Instruction to Public Health.
LEROY E. PARKINS, Boston.

The Response of Peritoneal Tissue to Dusts Introduced as Foreign Bodies (Lantern Demonstration).
JOHN W. MILLER and R. R. SAYERS, Washington, D. C., and WILLIAM P. YANT, Pittsburgh.

The Estimation of Functional Disability in the Pulmonary Fibroses (Lantern Demonstration).
A. HURTADO, W. W. FRAY, N. KALTREIDER and WILLIAM S. MCCANN, Rochester, N. Y.

The Control of Occupational Diseases by Laboratory Methods.
C. O. SAPPINGTON, Chicago.

Carbon Tetrachloride as an Industrial Hazard.
P. A. DAVIS, Akron, Ohio.

The Effects of Consolidation of State Health, Welfare and Licensure Functions to Preventive Medicine (Lantern Demonstration).
F. D. STRICKER, Portland, Ore.

Some Phase of Current Medical Relief Problems (Lantern Demonstration).
H. JACKSON DAVIS, Albany, N. Y.

Friday, June 15—2 p. m.

Election of Officers

EPIDEMIC ENCEPHALITIS

The Encephalitis Problem (Lantern Demonstration).
JOSEPHINE B. NEAL, New York.

1933 OUTBREAK

Epidemiology.
J. P. LEAKE, Washington, D. C.

Pathology (Lantern Demonstration).
HOWARD ANDERSON MCCORDOCK, St. Louis.

Etiology (Lantern Demonstration).
RALPH S. MUCKENFUSS, St. Louis.

Diagnosis (Lantern Demonstration).
THEODORE C. HEMPELMANN, St. Louis.

Treatment.
J. W. ESCHENBRENNER, St. Louis.

Prognosis.
ANDREW B. JONES, St. Louis.

Handling the Epidemic.
JOSEPH F. BREDECK and PAUL J. ZENTAY, St. Louis.

SECTION ON UROLOGY

MEETS IN CLUB ROOM B, THIRD FLOOR, CLEVELAND PUBLIC AUDITORIUM

OFFICERS OF SECTION

Chairman—HARRY CULVER, Chicago.
Vice Chairman—W. M. KEARNS, Milwaukee.
Secretary—J. H. MORRISSEY, New York.
Executive Committee—J. D. BARNEY, Boston; N. G. ALCOCK, Iowa City; HARRY CULVER, Chicago.

Wednesday, June 13—2 p. m.

SYMPOSIUM ON GONORRHEA

Immunologic Problems in Gonorrhea.
PERCY S. PELOUZE, Philadelphia.

The Treatment of Gonorrhea Based on Laboratory Observations During the Course of the Disease.
RUSSELL B. HERROLD, Chicago.

Methods of Treatment of Gonorrhea in Women (Lantern Demonstration).
EMILY D. BARRINGER, New York.

Discussion on papers of DRS. PELOUZE, HERROLD and BARRINGER to be opened by AUGUSTUS L. HARRIS, Brooklyn; HENRY W. E. WALTHER, New Orleans; HERBERT T. HAYES, Houston, Texas, and ROY W. MOHLER, Philadelphia.

Results with Corbus-Ferry Bouillon Filtrate and Other Forms of Intradermal Therapy in the Treatment of Gonorrhea (Lantern Demonstration).
R. E. CUMMING and ROBERT A. BURHANS, Detroit.
Discussion to be opened by BUDD C. CORBUS, Chicago.

The Criteria of Cure of Gonorrhea.
AMBROSE J. KING, London, England.
Discussion to be opened by C. T. STEPITA, New York.

Instrumental Methods of Procedure in the Treatment of the Prostatic and Vesicular Infections (Lantern Demonstration). JOSEPH F. MCCARTHY, New York.

The Treatment of Chronic Prostatitis by Incision with Electrocautery (Lantern Demonstration).
GERSHOM J. THOMPSON, Rochester, Minn.
Discussion on papers of DRS. MCCARTHY and THOMPSON to be opened by W. N. TAYLOR, Columbus, Ohio, and E. O. SMITH, Cincinnati.

Indications and Methods in Handling the Surgical Complications Occurring in the Treatment of Gonorrhea.
ALBERT E. GOLDSTEIN, Baltimore.
Discussion to be opened by MILEY B. WESSON, San Francisco, and ELMER HESS, Erie, Pa.

Presentation of a New Dilating Urethroscope for Women (Lantern Demonstration).
RALPH L. DOURMASHKIN, New York.

Thursday, June 14—2 p. m.

Chairman's Address: The Importance of the Streptococcus in Genito-Urinary Disease. HARRY CULVER, Chicago.

A Simplified Treatment of Bacilluria.
ANSON L. CLARK and B. F. KELTZ, Oklahoma City.

The Necessity for the Standardization of the Treatment of Bacilluria (Lantern Demonstration).
ALBERT M. CRANCE, Geneva, N. Y.
Discussion on papers of DRS. CULVER, CLARK and KELTZ, and CRANCE to be opened by WILLIAM P. HERBST JR., Washington, D. C., and IRA R. SISK, Madison, Wis.

SYMPOSIUM ON GENITO-URINARY TUBERCULOSIS

The Incidence of Renal Tuberculosis in Five Hundred Autopsies for General and Pulmonary Tuberculosis (Lantern Demonstration).
MONROE E. GREENBERGER and LEONARD P. WERSHUB, New York, and OSCAR AUERBACH, West New Brighton, S. I., N. Y.
Discussion to be opened by ROY B. HENLINE, New York, and THOMAS D. MOORE, Memphis, Tenn.

Tuberculous Nephritis (Lantern Demonstration).
FREDERICK LIEBERTHAL, Chicago.
Discussion to be opened by WILLIAM ROSENBERG, Cleveland, and BORIS E. GREENBERG, Boston.

Does the Diagnosis of Unilateral Renal Tuberculosis Always Indicate Nephrectomy?
STANLEY R. WOODRUFF, Jersey City, N. J., and H. C. BUMPUS JR., Pasadena, Calif.
Discussion to be opened by N. G. ALCOCK, Iowa City; J. C. PENNINGTON, Nashville, Tenn., and R. M. LECOMTE, Washington, D. C.

Genital Tuberculosis (Lantern Demonstration).
HUGH H. YOUNG, Baltimore.
Discussion to be opened by WILLIAM E. LOWER, Cleveland, and W. F. BRAASCH, Rochester, Minn.

Treatment of Urinary Tuberculosis—Old and New.
EDWARD L. KEYES, New York.
Discussion to be opened by W. G. SHULTZ, Tucson, Ariz.; CHARLES M. MCKENNA, Chicago, and C. J. MCDEVITT, Cincinnati.

Quartz Light Therapy in the Treatment of Bladder Tuberculosis (Lantern Demonstration).
STANLEY L. WANG, New York.

Friday, June 15—2 p. m.

Election of Officers

SYMPOSIUM ON UROLITHIASIS

The Present Conception of Renal Lithiasis (Lantern Demonstration).
VIRGIL S. COUNSELLER, Rochester, Minn., and J. B. PRIESTLY, Des Moines, Iowa.
Discussion to be opened by L. LICHTWITZ and JEROME M. LYNCH, New York.

Experimental Production and Dissolution of Urinary Calculi with Clinical Application (Lantern Demonstration).
CHARLES C. HIGGINS, Cleveland.
Discussion to be opened by WILLIAM J. ENGEL, Cleveland, and GEORGE H. EWELL, Madison, Wis.

Bilateral Urinary Calculi: The Medical and Surgical Handling of the Various Problems Involved (Lantern Demonstration). ALEXANDER R. STEVENS, New York.
Discussion to be opened by J. S. LEWIS JR., Youngstown, Ohio, and MOSES SWICK, New York.

Recurrent Urinary Calculi: Consideration of Etiologic Factors and Clinical Management (Lantern Demonstration).
LINWOOD D. KEYSER, Roanoke, Va.
Discussion to be opened by THOMAS P. SHUPE, Cleveland; RICHARD CHUTE, Boston, and FRANCIS P. TWINEM, New York.

The Medical and Surgical Treatment of Calculous Anuria (Lantern Demonstration).
GEORGE F. CAHILL, New York.
Discussion to be opened by HARRY R. TRATTNER, Cleveland, and GORDON F. MCKIM, Cincinnati.

The Indications for Operation and Treatment of Impacted Ureteral Calculus (Lantern Demonstration).
FREDERIC E. B. FOLEY, St. Paul.
Discussion to be opened by OSWALD S. LOWSLEY, New York, and ARTHUR R. KNAUF, Tampa, Fla.

Present-Day Management of Bladder Stones, with a Description of Visualized Litholapaxy (Lantern Demonstration).
ABRAHAM RAVICH, Brooklyn.

SECTION ON ORTHOPEDIC SURGERY

MEETS IN SOUTH HALL A, SECOND FLOOR, CLEVELAND PUBLIC AUDITORIUM

OFFICERS OF SECTION

Chairman—JAMES S. SPEED, Memphis, Tenn.
Vice Chairman—R. D. SCHROCK, Omaha.
Secretary—FREMONT A. CHANDLER, Chicago.
Executive Committee—JAMES WARREN SEVER, Boston; W. BARNETT OWEN, Louisville, Ky.; JAMES S. SPEED, Memphis, Tenn.

Wednesday, June 13—2 p. m.

The Treatment of Comminuted Fracture of the Patella in Which There Are One Large Fragment and Several Small Fragments (Lantern Demonstration).
J. E. M. THOMSON, Lincoln, Neb.
Discussion to be opened by JAMES S. SPEED, Memphis, Tenn.; H. R. CONN, Akron, Ohio, and MARCUS H. HOBART, Evanston, Ill.

Report of One Hundred Cases of Fracture of the Hip (Lantern Demonstration). LOUIS G. HOWARD, Boston.
Discussion to be opened by DALLAS B. PHEMISTER, Chicago; ARCHIBALD F. O'DONOGHUE, Sioux City, Iowa; E. T. EVANS, Minneapolis, and J. LAURENCE JONES, Kansas City, Mo.

End Result Study of Tuberculosis of the Hip Joint Treated by Fusion: A Study of One Hundred and Seventy Cases (Lantern Demonstration).
HALFORD HALLOCK and JAMES W. TOUMEY JR., New York.
Discussion to be opened by HENRY W. MEYERDING, Rochester, Minn.; FRANK R. OBER, Boston; C. H. HEYMAN, Cleveland, and JOSEPH S. BARR, Boston.

The Treatment of Simple Foot Imbalance (Lantern and Motion Picture Demonstration).
REX L. DIVELEY, Kansas City, Mo.
Discussion to be opened by CARL E. BADGLEY, Ann Arbor, Mich.; THEODORE A. WILLIS, Cleveland; LEWIS CLARK WAGNER and JOHN JOSEPH NUTT, New York, and J. J. KURLANDER, Cleveland.

Nonoperative Treatment of Fractures of the Bones of the Forearm, with Special Reference to the Treatment of These Fractures in Children and Adolescents: A Report of One Hundred and Fifty Consecutive Recent Cases (Lantern Demonstration). VOIGT MOONEY, Pittsburgh.
Discussion to be opened by RUDOLPH S. REICH and WALLACE S. DUNCAN, Cleveland, and D. H. LEVINTHAL, Chicago.

The Growth Disk. ARTHUR G. DAVIS, Erie, Pa.

Thursday, June 14—2 p. m.

Congenital Pseudarthrosis of the Tibia (Lantern Demonstration). PAUL CRENSHAW COLONNA, New York.
Discussion to be opened by ARMITAGE WHITMAN, New York; PHILIP LEWIN, Chicago; BURT G. CHOLLET, Toledo, Ohio, and HENRY W. MEYERDING, Rochester, Minn.

Nonunion in Fractures of the Shaft of Humerus: A Report on Four Cases (Lantern and Motion Picture Demonstration). JAMES WARREN SEVER, Boston.
Discussion to be opened by DALLAS B. PHEMISTER, Chicago; WILLIAM B. OWEN, Louisville, Ky., and WILLIAM L. SNEED, New York.

Chairman's Address: An Analysis of End Results in the Treatment of Central Fractures of the Neck of the Femur (Lantern Demonstration). JAMES S. SPEED, Memphis, Tenn.

Disabilities of the Hand Resulting from Loss of Joint Function (Lantern Demonstration). SUMNER L. S. KOCH, Chicago.
Discussion to be opened by WALTER G. STERN, Cleveland; ARTHUR STEINDLER, Iowa City, and L. E. PAPURT, Cleveland.

Statistical Analysis and Report on the Treatment of Five Hundred Cases of Congenital Dislocation of the Hip: Bloodless and Open Reduction and Late Palliative Operations (Lantern Demonstration). ARTHUR STEINDLER, ERNEST FREUND and JACOB KULOWSKI, Iowa City.
Discussion to be opened by EDWIN W. RYERSON, Chicago; JOSEPH A. FREIBERG, Cincinnati, and SAMUEL L. ROBBINS, Cleveland.

Dislocations of the Cervical Spine: Some Predisposing Causes (Lantern Demonstration). THEODORE P. BROOKES, St. Louis.
Discussion to be opened by ROBERT D. SCHROCK, Omaha, and CARL B. DAVIS, Chicago.

Injuries to the Vertebrae and Intervertebral Disks Following Lumbar Puncture (Lantern Demonstration). CHARLES N. PEASE, Chicago.
Discussion to be opened by R. WALLACE BILLINGTON, Nashville, Tenn.; EDWARD L. COMPERE, Chicago, and C. G. BARBER, Cleveland.

Friday, June 15—2 p. m.

Election of Officers

Treatment of Permanent Paralysis of Deltoid Muscle with Luxation at the Shoulder Joint (Lantern and Motion Picture Demonstration). SYLVAN L. HAAS, San Francisco.
Discussion to be opened by JAMES A. DICKSON, Cleveland; FRANK R. OBER, Boston; ROBERT D. SCHROCK, Omaha, and WALTER A. HOYT, Akron, Ohio.

The Mechanics of the Function of the Viscera in the Upper Part of the Abdomen (Lantern Demonstration). JOEL E. GOLDTHWAIT, Boston.
Discussion to be opened by EDWIN W. RYERSON and EMIL D. HAUSER, Chicago.

Coxa Magna: A Condition of the Hip Related to Coxa Plana (Lantern Demonstration). ALBERT B. FERGUSON and M. BECKETT HOWORTH, New York.
Discussion to be opened by ARTHUR T. LEGG, Boston, and OSCAR L. MILLER, Charlotte, N. C.

The Changes in Autogenous Bone Transplants (Lantern Demonstration). C. HOWARD HATCHER, Chicago.
Discussion to be opened by PAUL B. MAGNUSON, Chicago, and ESLIE ASBURY, Cincinnati.

Fracture of Both Bones of the Leg: Treatment by a Modified Boehler Method with a New Apparatus (Lantern Demonstration). R. A. GRISWOLD, Louisville, Ky.
Discussion to be opened by WILLIAM B. OWEN, Louisville, Ky.; J. A. CALDWELL, Cincinnati, and MAXWELL HARBIN, Cleveland.

The Influence of the Shoe on Gait, as Recorded by Electrobasograms and Slow Motion Pictures (Lantern and Motion Picture Demonstration). R. PLATO SCHWARTZ, Rochester, N. Y.
Discussion to be opened by FRANK R. OBER, Boston; ARTHUR STEINDLER, Iowa City, and G. I. BAUMAN, Cleveland.

SECTION ON GASTRO-ENTEROLOGY AND PROCTOLOGY

MEETS IN SOUTH HALL B, THIRD FLOOR, CLEVELAND PUBLIC AUDITORIUM

OFFICERS OF SECTION

Chairman—ALBERT F. R. ANDRESEN, Brooklyn.
Vice Chairman—WALTER A. FANSLER, Minneapolis.
Secretary—H. L. BOCKUS, Philadelphia.
Executive Committee—GEORGE B. EUSTERMAN, Rochester, Minn.; CURTICE ROSSER, Dallas, Texas; ALBERT F. R. ANDRESEN, Brooklyn.

Wednesday, June 13—9 a. m.

The Morphology and Function of a Continuous Reticular Coat of the Small Intestine (Lantern Demonstration). LEWIS GREGORY COLE, New York.
Discussion to be opened by EUGENE P. PENDERGRASS, Philadelphia.

Regional (Terminal) Ileitis: Its Roentgen Diagnosis (Lantern Demonstration). JOHN L. KANTOR, New York.
Discussion to be opened by HARRY M. WEBER, Rochester, Minn., and JAMES T. CASE, Chicago.

Intestinal Tuberculosis: An Analysis of One Thousand Autopsies, with Remarks on the Early Diagnosis by Double Contrast Barium Enema (Lantern Demonstration). RUSSELL S. BOLES and JACOB GERSHON-COHEN, Philadelphia.
Discussion to be opened by EDGAR MAYER, New York, and BENJAMIN H. ORNDOFF, Chicago.

Peptic Esophagitis: A New Clinical Entity (Lantern Demonstration). ASHER WINKELSTEIN, New York.
Discussion to be opened by CHEVALIER JACKSON, Philadelphia, and RUDOLPH KRAMER, New York.

Gastroscopy (Lantern and Motion Picture Demonstration). CHEVALIER JACKSON and CHEVALIER L. JACKSON, Philadelphia.
Discussion to be opened by GABRIEL TUCKER and WILLIAM A. SWALM, Philadelphia.

Histopathology of the Anal Crypts (Lantern Demonstration). CLAUDE C. TUCKER and C. ALEXANDER HELLWIG, Wichita, Kan.
Discussion to be opened by CHARLES E. POPE, Evanston, Ill., and LOUIS J. HIRSCHMAN, Detroit.

Thursday, June 14—9 a. m.

Chairman's Address: The Undergraduate Teaching of Gastro-Enterology in American Medical Schools (Lantern Demonstration). ALBERT F. R. ANDRESEN, Brooklyn.

Digestive Manifestations of Gout and Their Treatment (Lantern Demonstration). ANTHONY BASSLER, New York.
Discussion to be opened by HORACE W. SOPER, St. Louis, and E. W. SHANK, Dayton, Ohio.

Gastro-Intestinal Manifestations of Urologic Disease (Lantern Demonstration). SIDNEY A. PORTIS and J. S. GROVE, Chicago.
Discussion to be opened by HARLOW BROOKS, New York, and CHARLES M. MCKENNA, Chicago.

Jaundice: A Review of Experimental Investigations (Lantern Demonstration). F. C. MANN and J. L. BOLLMAN, Rochester, Minn.
Discussion to be opened by I. S. RAVDIN, Philadelphia, and A. C. IVY, Chicago.

The Galactose and Urobilinogen Tests in the Differential Diagnosis of Obstructive and Intrahepatic Jaundice (Lantern Demonstration). DAVID H. ROSENBERG, Chicago.
Discussion to be opened by M. A. BLANKENHORN, Cleveland, and LEON SCHIFF, Cincinnati.

Latent and Slight Jaundice: The Significance of Slightly Elevated Concentrations of Serum Bilirubin. H. M. ROZENDAAL, M. W. COMFORT and A. M. SNELL, Rochester, Minn.
Discussion to be opened by A. H. AARON, Buffalo, and V. C. ROWLAND, Cleveland.

Gonococcic Infection of the Rectum. CLEMENT L. MARTIN, Chicago.
Discussion to be opened by HERBERT T. HAYES, Houston, Texas, and CURTICE ROSSER, Dallas, Texas.

Friday, June 15—9 a. m.

Election of Officers

Cancer of the Rectum. JOSEPH W. RICKETTS, Indianapolis.
Discussion to be opened by FRED W. RANKIN, Lexington, Ky., and DUDLEY A. SMITH, San Francisco.

Krukenberg Tumor (Lantern Demonstration).
F. G. RUNYEON, Reading, Pa.
Discussion to be opened by JOSEPH C. BLOODGOOD, Baltimore, and HARRY E. BACON, Philadelphia.

Proteins Versus Carbohydrates: A Study of Their Gastric Digestion. MARTIN E. REHFUSS, Philadelphia.
Discussion to be opened by J. EARL THOMAS, Philadelphia, and ERNEST H. GAITHER, Baltimore.

The Unstable or Irritable Duodenum: Clinical Observations in One Hundred Cases.
JULIUS FRIEDENWALD and MAURICE FELDMAN, Baltimore.
Discussion to be opened by ELMER L. EGGLESTON, Battle Creek, Mich., and JOHN G. MATEER, Detroit.

Pain in Benign Ulcers of the Esophagus, Stomach and Small Bowel: The Diagnostic Significance of Type and Radiation with Some Observations of Pain Conduction Pathways (Lantern Demonstration).
ANDREW B. RIVERS, Rochester, Minn.
Discussion to be opened by RALPH C. BROWN and FRANK SMITHIES, Chicago.

Complications of Peptic Ulcer: Their Prognostic Significance (Lantern Demonstration).
SARA M. JORDAN and EVERETT D. KIEFER, Boston.
Discussion to be opened by BURRILL B. CROHN, New York, and J. TATE MASON, Seattle.

SECTION ON RADIOLOGY

MEETS IN NORTH HALL, LOWER LEVEL, CLEVELAND PUBLIC AUDITORIUM

OFFICERS OF SECTION

Chairman—A. U. DESJARDINS, Rochester, Minn.

Vice Chairman—AMÉDÉE GRANGER, New Orleans.

Secretary—JOHN T. MURPHY, Toledo, Ohio.

Executive Committee—HENRY K. PANCOAST, Philadelphia; GEORGE W. GRIER, Pittsburgh; A. U. DESJARDINS, Rochester, Minn.

Wednesday, June 13—9 a. m.

Chairman's Address. A. U. DESJARDINS, Rochester, Minn.

The Rôle of X-Ray Wavelength in Skin Tolerance (Lantern Demonstration).
PAUL C. HODGES and ALEXANDER BRUNSCHWIG, Chicago.

The Modified Coutard Technic in Roentgen Therapy (Lantern Demonstration). J. M. MARTIN, Dallas, Texas.

Further Observations on the Diagnosis and Treatment of Carcinoma of the Bladder by the Roentgen Rays (Lantern Demonstration). G. E. PFAHLER, Philadelphia.

Radiologic Aspect of Cancer of the Breast from Memorial Hospital (Lantern Demonstration).
FRANK E. ADAIR, New York.

Roentgen Therapy in Chronic Paranasal Sinusitis: A Further Report (Lantern Demonstration).
FRANK E. BUTLER and IVAN M. WOOLEY, Portland, Ore.

Thursday, June 14—9 a. m.

Calcification (Ossification) of Normal Laryngeal Cartilages Mistaken for Foreign Body (Lantern Demonstration).
W. EDWARD CHAMBERLAIN and BARTON R. YOUNG, Philadelphia.

Arteriography in Peripheral Vascular Disease (Lantern Demonstration).
JOHN D. CAMP and E. V. ALLEN, Rochester, Minn.

Differential Diagnosis of the Leukemic States, with Particular Reference to the Immature Cell Types (Lantern Demonstration). ROY R. KRACKE, Emory University, Ga.

Classification and Differential Diagnosis of the Anemias (Lantern Demonstration). RUSSELL L. HADEN, Cleveland.

The Relation of Cell Types in Leukemia to Sensitivity to Radiation (Lantern Demonstration).
RAPHAEL ISAACS, Ann Arbor, Mich.

Diagnosis and Treatment of Various Types of Leukemias (Lantern Demonstration). NATHAN ROSENTHAL, New York.

Friday, June 15—9 a. m.

Election of Officers

Intrahepatic Gallbladder (Lantern Demonstration).
E. P. MCNAMEE, Cleveland.

Comparison of the Urinary Tract in Pregnancy and Pelvic Tumors (Lantern Demonstration).
EDGAR C. BAKER and JOHN S. LEWIS JR., Youngstown, Ohio.

The Effect of Intracranial Tumors on the Sella Turcica (Lantern Demonstration).
KARL KORNBLUM and LESLIE H. OSMOND, Philadelphia.

Pulmonary Manifestations in Human Tularemia (Lantern Demonstration).
V. W. ARCHER and STAIGE D. BLACKFORD, University, Va.

Interlobar Pleural Effusions (Lantern Demonstration).
B. P. STIVELMAN, New York.

Interpretation of Roentgenographic Pathology in Pulmonary Tuberculosis (Lantern Demonstration).
HENRY K. TAYLOR, New York.

Early Diagnosis of Fulmination Pulmonary Tuberculosis in Adults: Necessity for Repeated Roentgen Examinations (Lantern Demonstration).
FRANKLIN B. BOGART, Chattanooga, Tenn.

SECTION ON MISCELLANEOUS TOPICS

MEETS IN NORTH HALL, LOWER LEVEL, CLEVELAND PUBLIC AUDITORIUM

Session on Forensic Medicine

OFFICERS OF SESSION

Chairman—LUDVIG HEKTOEN, Chicago.

Secretary—HARRISON S. MARTLAND, Newark, N. J.

Wednesday, June 13—2 p. m.

Reform of County Government and the Office of Coroner.
OSCAR T. SCHULTZ, Evanston, Ill.
Discussion to be opened by H. R. FISHBACK, Chicago.

The Office of the Chief Medical Examiner of New York City as a Medicolegal Center. CHARLES NORRIS, New York.

An Introductory Course in Legal Medicine for Medical Students (Lantern Demonstration).
S. A. LEVINSON and C. W. MUEHLBERGER, Chicago.

Forensic Application of Serologic Individuality Tests (Lantern Demonstration). KARL LANDSTEINER, New York.
Discussion to be opened by ALEXANDER S. WIENER, Brooklyn.

Subdural Hemorrhage (Lantern Demonstration).
TIMOTHY LEARY, Boston.

Alcohol and Automobile Accidents (Lantern Demonstration).
HERMAN A. HEISE, Milwaukee.
Discussion to be opened by ALEXANDER O. GETTLER, New York.

The Isolation of Volatile Poisons from Tissues and Their Identification (Lantern Demonstration).
ALEXANDER O. GETTLER, New York.
Discussion to be opened by HARRISON S. MARTLAND, Newark, N. J.

The Medicolegal Aspect of Silicosis.
WILLIAM D. MCNALLY, Chicago.
Discussion to be opened by HENRY C. SWEANY, Chicago.

An Epidemic of Fatal Estivo-Autumnal Malaria Among Drug Addicts in New York City Transmitted by Common Use of Hypodermic Syringe (Lantern Demonstration).
MILTON HELPERN, New York.
Discussion to be opened by CHARLES NORRIS, New York.

Carbon Monoxide Poisoning (Lantern Demonstration).
HARRISON S. MARTLAND, Newark, N. J.

Session on Nutrition

OFFICERS OF SESSION

Chairman—JAMES S. MCLESTER, Birmingham, Ala.

Secretary—WILLIAM S. MCCANN, Rochester, N. Y.

Thursday, June 14—2 p. m.

Nutrition and Resistance to Infection (Lantern Demonstration).
S. W. CLAUSEN, New York.

Address (Lantern Demonstration). H. R. GEYELIN, New York.
Discussion to be opened by JAMES E. PAULLIN, Atlanta, Ga.

Ulcerative Colitis: III. The Factor of Deficiency States: A Clinical Study (Lantern Demonstration).
THOMAS T. MACKIE, New York.

What Should a Patient with Arthritis Eat (Lantern Demonstration)? WALTER BAUER, Boston.

THE SCIENTIFIC EXHIBIT

The Scientific Exhibit will be located on the Arena Floor of the Auditorium—the floor directly above the Technical Exhibit and general registration desks. The same general arrangement of booths and decorations will be carried out as in former years. Features this year will be the group exhibits sponsored by the fifteen sections of the Scientific Assembly, motion picture programs to be run simultaneously by several sections, symposiums on amebiasis and treatment of burns as joint undertakings by different sections, special exhibits on treatment of eye injuries by the Section on Ophthalmology and on home delivery technic by the Section on Obstetrics, Gynecology and Abdominal Surgery, and special exhibits subsidized by the Committee on Scientific Exhibit.

Admission will be limited to individuals wearing Fellowship or other badges of the convention and to guests to whom special cards of admission have been issued. The exhibit will *not* be open to the public.

SPECIAL EXHIBITS

Exhibit on Encephalitis

The exhibit on encephalitis, with special reference to the 1933 outbreak, is presented by a special committee under the joint auspices of the Committee on Scientific Exhibit of the Board of Trustees of the American Medical Association, and the United States Public Health Service. The committee is composed of James P. Leake, Washington, D. C.; Ralph S. Muckenfuss, St. Louis, and Ralph C. Williams, chairman, Washington, D. C.

The exhibit will consist of charts, specimens, talks and demonstrations. It will be presented under four headings as follows:

Epidemiology:	J. P. Leake, Washington, D. C. E. K. Musson, Jefferson City, Mo. H. D. Chope, St. Louis.
Pathology:	H. A. McCordock, St. Louis W. D. Collier, St. Louis Elizabeth Moore, St. Louis
Etiology:	R. S. Muckenfuss, St. Louis Charles Armstrong, Washington, D. C. J. E. Smadel, St. Louis
Clinical Features:	R. A. Kinsella, St. Louis T. C. Hempelmann, St. Louis G. C. Broun, St. Louis

Exhibit on Nutrition

In conjunction with Symposium on Nutrition conducted by the Section on Miscellaneous Topics, an exhibit on nutrition will be shown in the Scientific Exhibit under the auspices of the Committee on Scientific Exhibit, the Committee on Foods, and HYGEIA, the Health Magazine. The committee in charge is composed of Walter C. Alvarez, Rochester, Minn.; Reginald Fitz, Boston, and P. C. Jeans, Iowa City. A competent corps of demonstrators will be on hand throughout the week. The following subjects will be included: foundation diets, overfeeding diets for the undernourished, reduction diets for the obese, antidiarrhea diets, anticonstipation diets, and nutrition in different diseases and abnormal conditions. A pamphlet covering these subjects will be distributed at the meeting.

Demonstrations in Pathology

The special demonstrations in pathology will be presented under the direction of Benjamin S. Kline, pathologist, Mount Sinai Hospital, Cleveland, with an advisory committee consisting of A. B. Luckhardt, Chicago; Frank W. Hartman, Detroit; Howard T. Karsner, Cleveland; William Carpenter MacCarty, Rochester, Minn., and J. P. Simonds, Chicago.

Arrangements have been made to secure both surgical and necropsy material from numerous sources and demonstrations in the exhibit booth will be conducted continuously throughout the week. As an additional feature, special demonstrations at stated periods each morning and afternoon will be given on various subjects in a room directly adjoining the exhibit booth with the following pathologists in charge: Howard T. Karsner, Harry Goldblatt, Allen Graham, R. Dominguez, Alan R. Moritz, H. S. Reichle, Anna M. Young and B. S. Kline.

SECTION EXHIBITS

Section on Practice of Medicine

Section exhibit committee: IRVING S. WRIGHT, chairman, New York; JAMES HAROLD AUSTIN, Philadelphia; WILLIAM J. KERR, San Francisco; EUGENE S. KILGORE, San Francisco, and L. G. ROWNTREE, Philadelphia.

Besides the exhibits sponsored by the Section on Practice of Medicine, the section is cooperating in the Symposium on Treatment of Burns and in the Symposium on Amebiasis and is contributing to the group of exhibits on thyroid diseases. It is also maintaining a motion picture program in an area adjoining the section exhibits, where motion pictures will be run on a definite schedule throughout the week.

ALBERT S. HYMAN, Witkin Foundation for the Study and Prevention of Heart Disease, Beth David Hospital, New York: Transthoracic electrocardiography; demonstration of the nine lead hook-up. Exhibit of photographs, charts, records, graphs and models illustrating the historical development of various leads used in electrocardiography; inadequacy of conventional three lead methods in certain types of coronary and myocardial disease; employment of transthoracic leads for diagnosis and localization of infarcted areas of heart muscle; reconstruction of electrodynamic triangle of the heart to conform with three dimensional theory; clinical application of the nine lead hook-up with demonstration of normal records from all age groups and exhibition of various myocardial lesions in coronary disease and allied conditions.

N. M. KEITH, H. P. WAGENER and N. W. BARKER, Mayo Clinic, Rochester, Minn.: Diffuse arterial disease with hypertension. Exhibit of (*a*) clinical data in essential hypertension with differentiation of groups I, II, III and IV; chronic glomerulonephritis with hypertension; hypertension associated with vasospastic phenomena; (*b*) enlarged photographs of ocular fundi showing characteristic retinal and vascular changes in foregoing groups; (*c*) photomicrographs of arterioles seen in biopsy of pectoralis major muscle in cases of hypertension, illustrating pathologic change and changes in lumen to wall ratio; (*d*) photomicrographs of retinal arterioles in above groups.

CLAYTON J. LUNDY and J. TETREV, Rush Medical College of the University of Chicago, Chicago: Clinical classification of ventricular extrasystoles. Exhibit of charts and photographs showing clinical occurrence and experiments on human hearts; study of selected electrocardiograms; relationships of age, type of heart disease, clinical left and right ventricular strain acute and chronic, coronary disease, extracardiac extrasystoles, cardiac hypertrophy especially with anemia, electrocardiographic relationships, congenital heart disease, and pulmonary artery stenosis.

WILLIAM P. MURPHY, Peter Bent Brigham Hospital, Boston: Therapeutic effects of intramuscular injections of liver extract. Exhibit of charts illustrating the effects of intramuscular injections of a solution of liver extract on the white blood cells, particularly granulocytes, the blood platelets and hemoglobin in secondary anemia. Two reel film on pernicious anemia, illustrating the diagnosis, treatment and results with special consideration of the use of liver extract by intramuscular injection.

EDWIN E. OSGOOD, CLARICE ASHWORTH and RICHARD YOUNG, University of Oregon Medical School, Portland, Ore.: Morphologic hematology; cells of blood and bone marrow in health and disease. Exhibit of colored drawings of cells of blood and bone marrow, arranged in the order of maturity; also a collection of stained smears of blood and bone marrow for microscopic study; the technic of obtaining bone marrow is illustrated.

H. L. SMITH and F. A. WILLIUS, Mayo Clinic, Rochester, Minn.: The heart in obesity. Exhibit of gross specimens completely encased in fat varying from one to several centimeters thick; gross sections showing line of demarcation between the fat and the muscle completely obliterated and fat penetrating completely through the walls of the ventricle and into the papillary muscles; gross specimens demonstrating that fat hearts will float on water and normal hearts will sink; colored photo-

micrographs demonstrating how fat has completely penetrated the wall of the ventricles; photographs of injected specimens showing the great vascularity of adipose tissue; photomicrographs of perfused, injected and isolated heart of rabbit showing size, distribution and the enormous capillary bed of a normal heart.

CARL R. STEINKE, CLARENCE L. HYDE and Associates, Springfield Lake Sanatorium, East Akron, Ohio: Treatment of pulmonary tuberculosis, showing examples of various types of treatment. Exhibit of roentgenograms showing results of types of treatment separately and in various combinations of results, as follows: 1. Rest cure. 2. Pneumothorax. 3. Phrenicectomy. 4. Paraffin fill. 5. Pressure bag. 6. Pneumolysis. 7. Thoracoplasty.

IRVING S. WRIGHT, A. WILBUR DUBYEE, JOSEPH KOVACS, DEAN MOFFAT and JOSEPH WIENER, Vascular Clinic, New York Post-Graduate Medical School and Hospital of Columbia University, New York: Peripheral vascular circulation; effects of tobacco and certain vasodilators. Exhibit of charts and other material demonstrating the effects of tobacco smoking on the peripheral vascular system; effects of choline derivatives, especially acetyl-B-methyl choline chloride, by various routes of administration; method of treatment.

WALLACE M. YATER and V. H. CORNELL, Army Medical Museum, Washington, D. C.: Lesions of the conduction system of the heart. Exhibit of colored plaques of microscopic sections through the conduction system at various levels. Photographs of salient electrocardiograms, roentgenograms, gross cardiac lesions and microscopic sections are shown of several cases of auriculoventricular and bundle branch block.

Motion Pictures.—The following motion pictures will be shown on a definite schedule, to be announced later:

CLAYTON J. LUNDY, Chicago: "The Normal Heart Beat Cycle."

WILLIAM P. MURPHY, Boston: "Pernicious Anemia: Diagnosis, Treatment and Results."

S. A. WEISMAN, Minneapolis, Minn.: "Is the Tuberculous Chest Flat?"

Section on Surgery, General and Abdominal

Section exhibit committee: ALTON OCHSNER, chairman, New Orleans, and W. L. ESTES JR., Bethlehem, Pa.

In addition to the exhibits sponsored by the Section on Surgery, General and Abdominal, the section is cooperating in the Symposium on Treatment of Burns and is taking charge of the motion picture program for that symposium.

CLAUDE S. BECK, Western Reserve University School of Medicine and Lakeside Hospital, Cleveland: Circulatory failure produced by compression of the heart, curable by operation. Exhibit of photographs, drawings, charts and motion picture illustrating physiology, pathology, clinical manifestations, operative procedures, and results in cases of cardiac compression. A new conception of pericardial disorders is presented and a new clinical nomenclature is advocated.

HARRY E. MOCK, A. R. MORROW and C. E. SHANNON, Northwestern University School of Medicine, Surgical Department, and St. Luke's Hospital, Chicago: Skull fractures and cerebral injuries. Exhibit of plaster models, charts and photographs illustrating skull fractures and cerebral injuries.

PENN RIDDLE, Baylor University College of Medicine, Dallas, Texas: Are peptic ulcers varicose ulcers? Exhibit of models and drawings showing varicose ulcers of the leg and peptic ulcers, illustrating their relation to the portal system of veins, augmented by a motion picture.

CLAIRE L. STRAITH, Detroit: Reconstructive facial surgery. Exhibit of enlarged photographs and models illustrating various points in technic and results accomplished in the treatment of facial deformities, particular attention being paid to treatment of facial wounds and facial bone injuries due to motor accidents.

J. ROSS VEAL and URBAN MAES, Department of Surgery, Louisiana State University Medical Center, New Orleans: Arteriography with thorium dioxide solution (stabilized) in peripheral vascular diseases. Exhibit of a number of selected arteriographs demonstrating various peripheral circulatory diseases, such as angiospasm, gangrene of various types, Buerger's disease, extravascular tumors and varicose veins; there will be included also one arteriovenous aneurysm of the femoral vessels and one popliteal aneurysm.

CHARLES S. WHITE, GEORGE B. JENKINS and J. LLOYD COLLINS, George Washington University School of Medicine, Department of Surgery and Anatomy, Washington, D. C.: Innervation of muscles of anterior abdominal wall. Exhibit of illustrations from dissections and operations.

Section on Obstetrics, Gynecology and Abdominal Surgery

Section exhibit committee: E. D. PLASS, chairman, Iowa City; ARTHUR H. BILL, Cleveland, and WILLIAM H. WEIR, Cleveland.

A special feature of the Section on Obstetrics, Gynecology and Abdominal Surgery will be an exhibit on home delivery technic, presented by the section exhibit committee. A motion picture program will be run in a space adjoining the exhibit.

SPECIAL EXHIBIT, SECTION ON OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY: Home delivery technic. A slum bedroom will be set up with the usual minimum amount of furniture. Demonstrations will be carried on each day on a definite schedule under the direction of the Obstetrical Department of Johns Hopkins Hospital, Baltimore, St. Louis Maternity Hospital, Maternity Hospital of Cleveland, Chicago Lying-In Hospital and Chicago Maternity Center.

LLOYD ARNOLD and C. J. GUSTAFSON, University of Illinois College of Medicine, Chicago: Normal menstruation. Exhibit of graphs, charts and colored drawings illustrating: (1) periodicity; (2) duration; (3) grams of exudate; (4) percentage of blood in exudate, in normal females from 12 to 50 years of age over a period of years.

E. C. HAMBLEN and ROBERT A. ROSS, Department of Obstetrics and Gynecology, Duke Hospital, Durham, N. C.: Studies of endometrial and ovarian responses in women to extracts of pregnancy urine. Exhibit of case summaries, photomicrographs of endometrium before and after administration of extracts; photomicrographs of portions of ovaries removed and studied after serial sectioning, and charts illustrating results obtained in several years of study of endometrial and ovarian responses to extracts of pregnancy urine administered preoperatively. These studies were made primarily in patients with hyperplasia of the endometrium.

WILLIAM C. LANGSTON and BYRON L. ROBINSON, University of Arkansas School of Medicine, Little Rock, Ark.: Castration atrophy and theelin. Exhibit of microscopic sections, charts and tables showing (1) effect of double ovariectomy on the rat uterus as to chronology, degree, location and histologic changes associated therewith; (2) effect of theelin as a restorative of atrophic rat uteri; (3) duration of effect of theelin as a restorative of atrophic uteri following double ovariectomy. In all experiments, opposite horns were used as controls.

T. O. MENEES and J. D. MILLER, Blodgett Memorial Hospital, Grand Rapids, Mich.: Demonstration of the endometrium by thorium hydroxide solutions. Exhibit of roentgenograms obtained by intra-uterine injection of thorium hydroxide solutions, including normal variations in the endometrium of the menstrual cycle, hyperplasia, endometrioma, polyps, retained products, submucous fibroids and carcinomas, accompanied by some gross specimens.

GILBERT P. POND, West Suburban Hospital, Oak Park, Ill.: A new and positive method of identification of new-born infants. Exhibit of palm printing outfit for infants and adults; series of typical prints; demonstration of classification methods, files, and charts illustrating types of palm patterns.

HENRY SCHMITZ and HERBERT E. SCHMITZ, Loyola University School of Medicine, Chicago: Early diagnosis, clinical grouping and indications of various methods of treatment of carcinoma of uterine cervix. Exhibit of charts illustrating and describing clinical observations, diagnosis of extent of tumor, indications for various methods of treatment, and technic of radiation therapy.

Motion Pictures: The following motion pictures will be shown on a definite schedule to be announced later:

JOSEPH B. DELEE, Chicago: "Safeguarding Motherhood."

Section on Ophthalmology

Section exhibit committee: THOMAS D. ALLEN, chairman, Chicago; PARKER HEATH, Detroit, and A. D. RUEDEMANN, Cleveland.

A special exhibit of the Section on Ophthalmology on First Aid in Eye Injuries will be presented under the auspices of the section exhibit committee.

SPECIAL EXHIBIT, SECTION ON OPHTHALMOLOGY: First aid in eye injuries. Exhibit will cover eye injuries in birth, in preschool age, in school age, in adults, in industry, in rural communities, the value of the roentgen ray in eye injuries, and a summary of preventive measures. The following ophthalmologists will demonstrate: Thomas D. Allen, Hallard Beard, Vernon L. Leech, Leo L. Mayer, Samuel J. Meyer, Sydney Walker and George H. Woodruff. A pamphlet giving essential factors concerning first aid will be distributed.

JOHN E. L. KEYES, Laboratory of Anatomy, Western Reserve University, Cleveland: Optic foramen in the dried human skull. Exhibit of photographs illustrating (1) normal optic foramen, (2) variations in the contiguous sinuses, (3) foramen for the internal carotid artery adjoining the optic canal, (4) separate foramen for the ophthalmic artery, (5) interclinoid bridges, (6) unusual apertures and walls of the optic foramen, (7) relationship of the long axis of the optic foramen to various planes of the skull. Prints of roentgenograms illustrating (*a*) the foregoing aberrations; (*b*) foramina roentgenographed (1) directly along the axis of their canals; (2) a known number of degrees off that axis; (3) from the outside of the skull, as in the living subject.

WILLIAM F. MONCREIFF and BERTHA KLIEN, Rush Medical College, University of Chicago, Chicago: Lesions of the fundus oculi. Exhibit of paintings and photographs showing histopathologic changes and ophthalmoscopic details in lesions of the following structures: (1) retina, including retinal vessels and macular area; (2) choroid; (3) optic papilla. Classified from the clinical and pathologic points of view, the following groups of lesions of the fundus oculi are presented: (1) congenital anomalies; (2) inflammatory processes; (3) degenerative processes; (4) injuries; (5) neoplasms.

GEORGE H. STINE, Colorado Springs, and CLIFFORD B. WALKER, Los Angeles: Intra-ocular localization and treatment of separated retina. Exhibit of diagrammatic charts showing the course of light rays from the retinal tear outward through the pupil by way of the nodal points and pupils of entrance and exit; method of determining the limbus distances to the retinal lesion from the angular position in the field of vision as found on the perimeter.

PHILLIPS THYGESON, University of Iowa, Iowa City: Laboratory diagnosis of certain conjunctival diseases, including etiology of inclusion blennorrhea. Exhibit of cultures, slides and colored drawings illustrating the essential points in the laboratory diagnosis of the following: pneumococcic conjunctivitis, staphylococcic conjunctivitis, chronic pseudomembranous conjunctivitis, Morax-Axenfeld conjunctivitis, Koch-Weeks and influenza bacillus conjunctivitis, trachoma, gonorrheal ophthalmia, spring catarrh and inclusion conjunctivitis of the new-born and the adult.

Section on Laryngology, Otology and Rhinology

Section exhibit committee: WILLIAM V. MULLIN, chairman, Cleveland; AUSTIN A. HAYDEN, Chicago, and JOHN J. SHEA, Memphis, Tenn.

CHEVALIER LAWRENCE JACKSON and ALBERT K. MERCHANT, Temple University Hospital, Philadelphia: Hiatal hernia of the stomach: differential diagnosis from "cardiospasm," peptic ulcer, cicatricial stenosis and carcinoma of the esophagus. Exhibit of transparencies showing roentgenographic and endoscopic appearances and histopathology, illustrating differential diagnosis of diseases of the lower esophagus, particular attention being paid to hiatal hernia of the stomach.

MYRON METZENBAUM, Cleveland: Asymmetry of the nares and dislocation of the lower end of the septal cartilage in the new-born and in young children. Exhibit of mounted photographs and casts, and a mechanically operated model demonstrating the foregoing subjects.

CLAUDE MOORE, George Washington University Hospital, Washington, D. C.: Tumors, polyps and cysts in the nasal accessory sinuses. Exhibit of roentgenograms showing tumors, polyps and cysts in the nasal sinuses. A large number of cases proved by iodized oil injection with roentgenologic examination, with clinical data, operative procedures and other information.

WILLIAM V. MULLIN and W. L. DEETON, Department of Otolaryngology, Cleveland Clinic, Cleveland: Comparative study of the larynx. Exhibit of a study of the larynx by wax models of the interior and exterior of the larynx of animals, reptiles and birds.

Section on Pediatrics

Section exhibit committee: F. THOMAS MITCHELL, chairman, Memphis, Tenn.; W. C. FARGO, Cleveland, and ABRAHAM LEVINSON, Chicago.

H. H. DONNALLY and MARGARET M. NICHOLSON, George Washington University School of Medicine, Washington, D. C.: Smallpox vaccination of new-born infants. Exhibit of colored life size drawings of three types of takes; charts and tables relating to methods of securing takes and covering a study of vaccination of a large number of new-born infants.

J. M. FRAWLEY, Fresno, Calif.: The prophylaxis of whooping cough. Exhibit demonstrating the preparation of pertussis antigen, showing the various stages from the time the cough plates are taken until the antigen solution is ready for use; charts showing the value of prophylactic vaccination.

HENRY J. GERSTENBERGER, A. J. HORESH, J. D. NOURSE, G. R. RUSSELL, A. L. VANHORN, DONALDA N. SMITH, CATHARINE ROSE, EDNA CHAPMAN and DAVID SHIELDS, Babies and Childrens Hospital, Cleveland: Tungsten filament radiation (dual purpose lighting). Exhibit of (*a*) photographs illustrating the manner of exposure of wetnurses, orphanage children and rachitic infants to ceiling lights; (*b*) graphic charts showing diet, blood calcium and phosphorus levels of rachitic infants before and during the observation period; (*c*) roentgenograms of wrists of infants, showing rate and extent of healing; (*d*) roentgenograms showing effect of feeding rats a rachitic diet to which the blood from the exposed wetnurses and orphanage children has been added.

ARCHIBALD L. HOYNE and JOHN HAYS BAILEY, Municipal Contagious Disease Hospital, Chicago: The secondary case of scarlet fever. Exhibit of china figures, charts, diagrams and graphs showing the origin of secondary cases of scarlet fever from hospitalized cases; the complication present in both primary and secondary cases and the effect of various quarantine regulations on the secondary scarlet fever rate.

J. ARTHUR MYERS, Lymanhurst School and University of Minnesota, Minneapolis: Tuberculosis in chests of children and young adults. Exhibit of roentgenograms of chests of children which show the development of the first infection type of tuberculosis from the acute inflammatory stage to the formation of calcium deposits. Reinfection type of disease is also demonstrated from its earliest detectable stage to cavity formation. Various types of lesions and results of treatment are shown by roentgenograms.

FRANK VANDER BOGERT, Department of Pediatrics, Ellis Hospital, Schenectady, N. Y.: Study in infant stools. Exhibit of a collection of mounted plasticine models of infant stools from actual normal and abnormal specimens, showing the effects of various types of feeding and of changes in the constituents of the formulas.

Section on Pharmacology and Therapeutics

Section exhibit committee: RUSSELL L. HADEN, chairman, Cleveland; A. CARLTON ERNSTENE, Cleveland, and CARL H. GREENE, New York.

The Section on Pharmacology and Therapeutics is contributing to the Symposium on Amebiasis in addition to the exhibits listed below:

FRANKLIN J. BACON, Western Reserve University School of Pharmacy, Cleveland: Cultivation of medicinal plants. Exhibit of pictures, mounted specimens and potted plants cultivated by the School of Pharmacy at Squire Valleevue Medicinal Plant Garden; demonstration of manufactured products from plants grown.

O. W. BARLOW and J. L. JONES, Departments of Pharmacology and Obstetrics, Western Reserve University School of Medicine, Cleveland: Charts and apparatus showing records of the actions of ergot.

C. K. HIMMELSBACH, United States Public Health Service, Fort Leavenworth, Kansas, and G. H. GERLACH and E. J. STANTON, Department of Pharmacology, Western Reserve University School of Medicine, Cleveland: Method of testing morphine, codeine and diacetylmorphine habituation in rats. Exhibit of apparatus, tracings and charts showing the trend of struggle response exhibited during habituation to and withdrawal from morphine, codeine and diacetylmorphine.

W. E. LOWER, E. L. WALSH and D. ROY MCCULLAGH, Cleveland Clinic Foundation, Cleveland: Experimental investigation of testicular extracts. (*a*) Exhibit of mounted specimens, wax models and diagrams demonstrating parabiosis in rats; demonstration of prostatic hypertrophy and atrophy in rats. (*b*) Wax models and diagrams showing effects of castration on other endocrine organs and the influence of various injections on these changes. (*c*) Diagrams showing the effect of injections of male sex hormone in normal rats.

(*a*) TORALD SOLLMANN, Department of Pharmacology, Western Reserve University School of Medicine, Cleveland: Studies on optical projection of excised organ activity in the frog heart. (*b*) TORALD SOLLMANN, H. N. COLE, N. E. SCHREIBER and K. I. HENDERSON, Department of Dermatology, Western Reserve University School of Medicine, Cleveland: Charts illustrating excretion studies of mercury and bismuth.

Section on Pathology and Physiology

Section exhibit committee: WILLIAM CARPENTER MACCARTY, chairman, Rochester, Minn.; FRANK W. HARTMAN, Detroit; A. B. LUCKHARDT, Chicago, and J. P. SIMONDS, Chicago.

In addition to the exhibits listed below, the Section on Pathology and Physiology is cooperating in the Symposium on Treatment of Burns and in the Symposium on Amebiasis and is contributing to the group of exhibits on thyroid diseases. The section exhibit committee is also acting in an advisory capacity concerning the special demonstrations in pathology.

L. W. DIGGS, Department of Clinical Pathology, University of Tennessee, Pathological Institute, Memphis, Tenn.: Sickle cell anemia. Exhibit of (1) series of photographs, photomicrographs and drawings showing the appearance of patients with sickle cell anemia, the leg ulcers, the blood picture, the pathologic changes and the roentgen observations; (2) printed matter giving a word picture of the disease under etiology, incidence, history, physical examination, laboratory observations, pathology, prognosis and treatment; (3) microscopes to demonstrate blood smears, moist preparations and pathologic sections.

CHESTER W. EMMONS, College of Physicians and Surgeons, Columbia University, New York: Morphologic basis for a simplified classification of the dermatophytes. Exhibit of cultures of different types of dermatophytes, of photographs of cultures, photomicrographs and drawings of significant morphologic features, keys and explanatory material.

RUSSELL L. HADEN, Cleveland Clinic, Cleveland: 1. Exhibit of charts and apparatus to illustrate the complete laboratory examination of the blood and methods of calculation. 2. Natural color photomicrographs of all types of blood cells and various blood dyscrasias.

REUBEN L. KAHN, University of Michigan Hospital, Ann Arbor, Mich.: Studies on tissue reactions in immunity. Exhibit of charts showing quantitative measurements of skin reactions in specifically immunized animals; relation between skin reactions and serum reactions; specific reacting capacities of various tissues; desensitization (disimmunization) and associated phenomena.

ROY R. KRACKE and FRANCIS P. PARKER, Emory University School of Medicine, Atlanta, Ga.: The etiology of granulopenia (agranulocytosis). Exhibit of charts, tables, graphs and diagrams illustrating the incidence of granulopenia in nurses, physicians and physicians' families; studies bearing on geographic distribution and on the incidence as related to the administration of certain types of drugs with evidence that the disease is caused by the administration of certain benzene containing drugs and barbiturates; records of animal experiments showing effect of these drugs in rabbits and guinea-pigs.

ALAN R. MORITZ, Department of Pathology, Western Reserve University, Cleveland: Ovarian tumors. Exhibit of a series of translucent photographs showing gross and microscopic structures of tumors of the ovary.

VICTOR C. MYERS, E. MUNTWYLER, F. C. BING, R. F. HANZAL and C. T. WAY, Western Reserve University School of Medicine, Cleveland: Biochemical diagnostic methods. Exhibit of practical demonstrations of simple clinical procedures in biochemical diagnostic methods. A regular schedule of demonstrations will be run each day.

HERBERT S. REICHLE, HOWARD T. KARSNER and THOMAS T. FROST, Institute of Pathology, Western Reserve University School of Medicine, Cleveland: Typical forms of tuberculous pulmonary disease. Exhibit of transilluminated photographs of coronal sections of the lungs fixed in situ, illustrating pathogenesis of tuberculous infection and demonstrating morphologic bases of the more common types of tuberculous pulmonary disease.

JANE SANDS ROBB and J. F. FRED HISS, Syracuse University College of Medicine, Syracuse, N. Y.: Cardiac muscles. Exhibit of human hearts dissected to show the component muscles; similar dissections of dog hearts; colored plaster casts of dissections; preparations of injected coronary vessels; charts and tracings showing typical changes in electrocardiogram when an individual muscle is eliminated.

GEORGE C. SHIVERS, University of Colorado Medical School, Colorado Springs: Avoidance of pulmonary embolism from intravenous arsenicals. Exhibit of tissue, slides, photographs, charts and test tube experiments, demonstrating (*a*) a fatal case of pulmonary embolism from an intravenous arsenical; (*b*) the frequency of such accidents; (*c*) the cause of such embolism to be a change in the p_H value of the drug with a resultant precipitation of the drug in the blood stream; (*d*) method devised for the prevention of pulmonary embolism from intravenous arsenicals.

GREGORY SHWARTZMAN, Mount Sinai Hospital, New York: Phenomenon of local skin reactivity to bacterial filtrates. Exhibit of charts, diagrams, lantern slides, microscopic slides, moulages, living animals and preserved specimens illustrating the appearance and nature of the phenomenon; its rôle in immunology in relation to other immunologic processes; new types of toxins and antitoxins and practical applications to treatment of typhoid fever, meningococcic meningitis and nonspecific ulcerative colitis.

MARGARET WARWICK, Millard Fillmore Hospital, Buffalo: The necropsy in the general hospital, as interpreted at the Millard Fillmore Hospital. Exhibit of posters and photographs showing the importance and the availability of the necropsy to the general hospital, and methods of overcoming the usual objections.

Section on Nervous and Mental Diseases

Section exhibit committee: GROVES B. SMITH, chairman, Godfrey, Ill.; THOMAS J. HELDT, Detroit, and LLOYD ZIEGLER, Albany, N. Y.

A. W. ADSON, W. MCK. CRAIG, J. G. LOVE, H. W. WOLTMAN, F. P. MOERSCH, H. L. PARKER, W. D. SHELDEN and J. W. KERNOHAN, Mayo Clinic and Mayo Foundation, Rochester, Minn.: Neurologic diseases and neurosurgical procedures. Exhibit of moulages showing technic of some of the more important operations on the brain and cord; transparencies, photomicrographs, abstracts of histories, and motion pictures illustrating various parts of a neurologic examination and some operations.

MAX A. BAHR and WALTER L. BRUETSCH, Central State Hospital and Department of Mental and Nervous Diseases, Indiana University School of Medicine, Indianapolis: Malarial treatment of dementia paralytica. Exhibit of transparencies showing the activation of the histiocytes (clasmatocytes, macrophages) in the brain, liver, spleen and bone marrow during the malaria treatment; comparative study of stimulating phagocytosis with malaria plasmodia, streptococci and other organisms; the blood picture of therapeutic malaria; the dangers of

the malaria treatment; the histopathology of untreated and malaria-treated dementia paralytica; the influence of therapeutic malaria on the ocular manifestations in dementia paralytica; serologic histories of malaria-treated patients with dementia paralytica.

WALLACE B. HAMBY and W. JAMES GARDNER, Cleveland Clinic, Cleveland: Intracranial neoplasms. Exhibit of charts illustrating various types of intracranial tumors, each with patient's history, physical observations, data of special examinations, notes and photographs of operations, together with a summary of the type pathology.

HARRY D. PIERCY and LOUIS J. KARNOSCH, Cleveland: Cerebrospinal fluid hydrodynamics, with a demonstration of encephalography and graphic methods of recording pressure phenomena. Exhibit of: 1. Practical demonstration of encephalography done by the closed methods; a manikin constructed to show how displacement occurs. 2. Manikin with the Trattner hydrophorograph attached to needles in the cistern and lumbar locus demonstrating how permanent graphic records are obtained in subarachnoid block tests. 3. Illuminated box showing different conditions recorded by such methods which have important diagnostic significance. 4. Encephalographic studies.

Section on Dermatology and Syphilology

Section exhibit committee: FRED D. WEIDMAN, chairman, Philadelphia; CLARK W. FINNERUD, Chicago; ROBERT L. GILMAN, Philadelphia, and JOHN E. RAUSCHKOLB, Cleveland.

Symposium on Cutaneous Allergy: MARION B. SULZBERGER and FRED WISE, New York Post-Graduate Medical School of Columbia University, New York: Allergic Dermatoses (illustrating paper by Alfred F. Coca to be read before the Section on Dermatology and Syphilology). Exhibits by NELSON PAUL ANDERSON and SAMUEL AYRES JR., Los Angeles: Observations on light sensitive dermatoses and by LOUIS A. BRUNSTING and C. R. ANDERSON, Mayo Clinic, Rochester, Minn.: Ragweed dermatitis, illustrate papers which they will read before the Section on Dermatology and Syphilology.

Authors' Exhibits: The following exhibits illustrate papers to be read before the Section on Dermatology and Syphilology:

THEODORE CORNBLEET and M. A. KAPLAN, University of Illinois College of Medicine, Chicago: Urinary proteose in eczema. Exhibit of materials isolated and placards giving the essential results of their use in skin tests, therapeutic trials and immunologic studies in rabbits.

NORMAN EPSTEIN and MAURICE COHEN, Mount Zion Hospital, San Francisco: The use of hyperpyrexia in the treatment of syphilis. Exhibit of photographs illustrating method of carrying out treatment; temperature charts and graphic illustrations of results.

GEORGE M. LEWIS and DAVID L. SATENSTEIN, New York Post-Graduate Hospital, New York: Spiegler-Fendt sarcoid. Exhibit of clinical photographs, photomicrographs and diagrams illustrating the Spiegler-Fendt sarcoid.

JAMES HERBERT MITCHELL, Rush Medical College, Chicago: Exhibit of photographs illustrating streptococcic infections simulating ringworm of the hands and feet.

SAMUEL M. PECK, NATHAN ROSENTHAL and HAROLD A. ABEL, Mount Sinai Hospital, New York: Snake venom therapy in hemorrhagic diathesis. Exhibit of colored drawings and pictures of skin manifestations following injections of venom; Shwartzman phenomenon; pictures of the different types of snakes; exhibit of charts and graphs demonstrating clinical effects of venoms.

MAURICE J. STRAUSS and MARION E. HOWARD, Yale University Medical School and New Haven Hospital, New Haven, Conn.: The Frei test for lymphogranuloma inguinale. Recovery of the antigen from a strongly positive test. Exhibit of charts showing results of experiments; photographs and lantern slides of the test.

FRED D. WEIDMAN and JACQUES P. GUEQUIERRE, University of Pennsylvania, Philadelphia: High frequency currents in performing biopsies. Exhibit demonstrating that electric currents may produce such a wide zone of coagulation necrosis around biopsy specimens as to interefere with histologic study. Data indicate how wide such a zone of coagulation necrosis may be with different coagulating and cutting currents; it is also indicated how small a specimen may be removed by such technic and still preserve sufficient noncoagulated tissue for histologic study.

ASHTON LEROY WELSH, Mayo Foundation, Rochester, Minn.: Pemphigus. Exhibit of photographs of experimental lesions in animals and man; charts illustrating agglutination, absorption agglutination, precipitin fermentation, cataphoretic velocity, serum potential, absorption serum potential, and serum potential studies of pemphigus and control serum; photographs of organisms, and charts illustrating some of the characteristic properties of the organism.

ERWIN P. ZEISLER and MARCUS R. CARO, Chicago: Necrobiosis lipoidica diabeticorum. Exhibit of colored photographs and photomicrographs illustrating clinical appearance and histologic observations.

Independent Exhibits: The following exhibits are independent of the symposium and the authors' papers:

PAUL BECHET, New York: Exhibit of photographs and charts illustrating hereditary dermatoses; diagrams showing lines of transmission through different generations.

H. N. COLE and J. R. DRIVER, Department of Dermatology, Western Reserve University School of Medicine, Cleveland: Treatment of malignant conditions of the skin and mucous membranes. Exhibit of transparent photographs and photomicrographs illustrating the modern trend in the treatment of malignant conditions of the skin and mucous membrane. The technic and results of treatment by the interstitial use of heavily filtered radium needles of small intensities is featured.

R. L. MCINTOSH and M. E. DIEMER, University of Wisconsin, Madison, Wis.: Delochrome prints. Exhibit of Delochrome prints from a large collection of photographs of living patients with dermatologic diseases, to illustrate the adaptability of these prints to photographing dermatologic conditions, to bring out the minute variations and details so essential in dermatologic diagnosis.

MARTIN SNYDERMAN, Department of Dermatology, University of Pittsburgh, Pittsburgh: Exhibit of moulages illustrating actual dermatologic conditions.

ERWIN P. ZEISLER and MISS ESTHER BOHLMAN, Michael Reese Hospital, Department of Dermatology, Chicago: Exhibit of colored photographs of skin and mucous membrane lesions selected for their value for teaching purposes.

Section on Preventive and Industrial Medicine and Public Health

Section exhibit committee: PAUL A. DAVIS, chairman, Akron, Ohio; ALICE HAMILTON, Boston; THURMAN B. RICE, Indianapolis, and THEODORE L. SQUIRE, Milwaukee.

The Section on Preventive and Industrial Medicine and Public Health is cooperating in the Symposium on Amebiasis in addition to the following exhibits:

EMILY DUNNING BARRINGER, HYMAN STRAUSS, D. F. CROWLEY, in collaboration with ANNA W. WILLIAMS, ANNIS THOMSON and ARCHIBALD MCNEIL, Kingston Avenue Hospital, New York: Differential diagnosis of gonorrhea in the female. Exhibit demonstrating differential diagnosis of gonorrhea in the female; symptoms and laboratory tests differentiating gonorrhea from other inflammatory diseases of the female genital tract, especially due to Actinomyces.

LOUIS I. DUBLIN, Metropolitan Life Insurance Company, New York: Progress in public health since 1900. Exhibit of charts showing past and present public health problems; the fight against diseases; the gains in chances of survival.

R. R. JONES, United States Public Health Service, Washington, D. C.: The lead hazard in industry and its control. Exhibit of charts and graphs showing the extent of lead compounds most commonly used and the solubility in the body fluids; recognized procedure for the control of industrial plumbism; demonstration of sampling apparatus by measuring the lead content in the atmosphere; demonstration and test for lead in human excreta and demonstration of blood films showing changes typical of plumbism.

THURMAN B. RICE and VERNE K. HARVEY, Indiana University and Indiana Division of Public Health, Indianapolis: The "Indiana Plan" of health work coordination. Exhibit of plans, charts and maps showing the work of the new division of public health in Indiana.

Section on Urology

Section exhibit committee: RUSSELL S. FERGUSON, chairman, New York; THOMAS D. MOORE, Memphis, Tenn., and MOSES SWICK, New York.

The exhibits of the Section on Urology will fall into three groups, to correspond with the three symposiums to be considered by the section in the Scientific Assembly.

LAWRENCE N. ATLAS and CHARLES A. BOWERS, Department of Urology, St. Luke's Hospital, Cleveland: Methods for teaching basic urology. Exhibit of lead molds of different types of normal and abnormal kidney pelves together with their respective pyelograms; plaster reproductions of variations in the anatomy of the dissected hilus of normal and pathologic kidneys, and of pathologic bladder necks.

A. ELMER BELT and DONALD A. CHARNOCK, Los Angeles: Urinary calculi. Exhibit of urinary calculi with graphic illustrations concerning formation, classification, diagnosis and treatment.

HUGH CABOT, WALTMAN WALTERS, V. S. COUNSELLER and J. T. PRIESTLEY, Division of Surgery, and W. F. BRAASCH, Division of Urology, Mayo Foundation, Rochester, Minn.: Operative treatment of stones in the kidney. Exhibit of (1) motion picture of operative technic in removal of renal stones; (2) continuous lantern projector showing slides on surgical management, factors of safety and illustrative cases; (3) stationary displays on general management of a large number of cases of nephrolithiasis, factors predisposing to calculus formation, postoperative treatment, chemical composition of stones; exhibit of stones and special features regarding bilateral and recurrent renal stones and display of specimens.

CHARLES C. HIGGINS, Cleveland Clinic, Cleveland: Experimental production and solution of urinary calculi. Exhibit of roentgenograms demonstrating experimentally formed renal and bladder stones in rats under vitamin A deficiency; charts showing incidence of renal and bladder infection in rats under vitamin A deficiency diet, and frequency of stones at intervals during the experiment. Roentgenograms of clinical cases demonstrating the decrease in size of the renal calculi when patient is placed on a special diet high in vitamin A.

FREDERICK LIEBERTHAL, Department of Urology, Michael Reese Hospital, Chicago: Special pathology of renal tuberculosis. Exhibit of drawings and charts of a study of a large number of cases of renal tuberculosis, depicting the development of the disease from the earliest states to complete destruction of the kidney.

LELAND M. MCKINLAY, Grand Rapids, Mich.: Nerve control of the urinary bladder, mechanical demonstration. Exhibit of a life size model of a male torso connected electrically and mechanically so that the complete act of urination is enacted, to illustrate the response of the urinary bladder and sphincters to impulses coming over the sympathetic and parasympathetic nerves, and the coordinated contraction or relaxation of the internal and external sphincters. A series of cystometrograms is presented to demonstrate the variations in intracystic pressure subsequent to the use of sympathetic and parasympathetic nerve stimulants.

W. CALHOUN STIRLING, Washington, D. C.: Carcinoma of the prostate gland. Exhibit of photographs and specimens showing incidence, latest methods of diagnosis, symptoms, differential diagnosis, gross and microscopic anatomy, associated gross lesions, and all forms of latest recognized therapy.

G. J. THOMPSON and J. T. PRIESTLEY, Mayo Clinic, Rochester, Minn.: Transurethral prostatic resection. Exhibit showing the type of case encountered, method of preliminary preparation, technic of operation and postoperative care, including complications, and necropsy material. Special emphasis will be placed on technic and methods employed to prevent complications.

Section on Orthopedic Surgery

Section exhibit committee: E. B. MUMFORD, chairman, Indianapolis; PAUL N. JEPSON, Philadelphia, and J. T. O'FERRALL, New Orleans.

WALTER BAUER and GRANVILLE A. BENNETT, Departments of Medicine and Pathology, Harvard Medical School and Medical Clinic of Massachusetts General Hospital, Boston. Degenerative changes in joints resulting from continued trauma and increasing age and their relationship to hypertrophic arthritis. Exhibit of charts, photographs, roentgenograms, gross specimens and microscopic sections, illustrating the repair of articular cartilage and the effects of patellar displacement, together with changes resulting from unusual and continued trauma.

MICHAEL S. BURMAN, LEO MAYER and HARRY FINKELSTEIN, Hospital for Joint Diseases, New York: Arthroscopy: the direct visualization of joints. Exhibit of paintings, photographs and charts showing the summation of numerous cases in which arthroscopy was used.

ALBERT B. FERGUSON and M. BECKETT HOWORTH, New York Orthopedic Dispensary and Hospital, New York: Coxa plana and related conditions at the hip. Exhibit of prints, diagrams and microscopic slides demonstrating the etiology, pathology and relations of coxa plana, slipping of the upper femoral epiphysis, osteochondritis dissecans, arthritis and a condition, designated coxa magna, characterized by enlargement of the femoral head and neck.

EDSON B. FOWLER, Department of Anatomy, Northwestern University Medical School, Chicago: Absorbable horn fixation of fractures. Exhibit of (1) many long human bones fractured to illustrate various kinds and location of breaks and held with horn by simplified method of internal fixation; (2) horn in stages of preparation and sizes of stock needed in different bones; (3) new fracture instrument for reduction and bone reamers that simplify the technic; (4) roentgenograms of several cases of fractures before and after, with end results; (5) specimen of horn fixation of fractured dog's ulna showing union and partial absorption of the horn.

BAYARD T. HORTON, Mayo Foundation, Rochester, Minn.: Congenital arteriovenous fistula of the extremities. Exhibit of photographs, wax casts, roentgenograms, arteriograms and photomicrographs illustrating clinical, physiologic and pathologic studies of a series of cases of congenital arteriovenous fistula of the extremities.

CHARLES N. PEASE, Children's Memorial Hospital, Chicago: Injuries to the vertebrae and intervertebral disks following lumbar puncture. Exhibit of sketches showing the intervertebral disk and vertebrae, normal and when spine is flexed, showing increasing intradisk pressure and herniation into neural canal; roentgenograms of actual cases; mounted gross specimens showing needle pushed into disk and into vertebral body; photographs of vertebrae and disks; enlargement of lumbar spine, with accompanying photomicrographs. A large model of the lumbar spine and intervertebral disks made out of wood, showing what happens when needle is introduced too far.

R. PLATO SCHWARTZ, University of Rochester School of Medicine and Dentistry, Rochester, N. Y.: Muscle function and gait as recorded by the electrobasograph. Exhibit presenting (1) the demonstration of a method of obtaining records of the function of certain muscles during walking; (2) records that will give graphic evidence of the improvement in function of locomotion following treatment for various causes of disability in function of the lower extremities; (3) records that will show the influence of various types of shoes on feet with different physical characteristics.

FRED J. WAMPLER, Medical College of Virginia, Richmond, Va., and J. PRESTON MAXWELL, Peiping Union Medical College, Peiping, China: Osteomalacia. Exhibit of slides and charts illustrating (*a*) the principal causes of the disease; (*b*) early symptoms; (*c*) facts obtained in a study of a number of Chinese women; charts showing fetal rickets and pictures relative to the disease.

Section on Gastro-Enterology and Proctology

Section exhibit committee: A. H. AARON, chairman, Buffalo; WALTER FANSLER, Minneapolis, and VERNON C. ROWLAND, Cleveland.

The Section on Gastro-Enterology and Proctology is giving special attention to the Symposium on Amebiasis, in addition to the following exhibits:

BURRILL B. CROHN and LEON GINZBURG, Mount Sinai Hospital, New York: Regional ileitis. Exhibit of slides showing histologic structure of inflammatory lesion; charts showing distribution of inflammatory granulomas in ileum and contrasting benign involvements of colon, or colon and ileum in colitis and the dysenteries.

THOMAS E. JONES, Cleveland Clinic Foundation, Cleveland: Carcinoma of colon and rectum. Exhibit of wax models showing malignant growths of the colon, chiefly of the rectum, removed by abdominal perineal method.

JOHN L. KANTOR, New York: Regional (terminal) ileitis. Exhibit of prints of roentgenograms illustrating diagnostic and differential diagnostic criteria on regional ileitis.

LAY MARTIN, Johns Hopkins University, Baltimore: Studies on the physiologic chemistry of gastric secretion. Exhibit of charts demonstrating normal and pathologic states of gastric secretion; tubes containing organic and inorganic materials; microscopic demonstrations of crystallized gastric proteins and osazones.

HENRY A. RAFSKY, From the Max Einhorn Gastro-Enterological Clinic, Lenox Hill Hospital, New York: Stomach lavage microscopy as a diagnostic aid in biliary tract disease. Exhibit of a study of a group of patients with and without biliary tract disease. Photomicrographs of crystals observed in lavage water before operation compared with photomicrographs of crystals seen in the bile and stones removed from the gallbladder or bile ducts at operation will be shown.

CURTICE ROSSER and LEWIS WATERS, Baylor University, Department of Medicine, Sections on Proctology and Medical Art, Dallas, Texas: Anal tumors and rectal foreign bodies. Exhibit of illuminated photographs, photomicrographs and drawings illustrating (1) gross and microscopic pathology of various benign and malignant tumors of the anal canal and (2) a number of ingested and inserted foreign bodies of the lower bowel. The possible etiologic connection of benign anal lesions with cancer is shown and proper methods of removal of small and large rectal foreign bodies is illustrated.

CLAUDE C. TUCKER and C. ALEXANDER HELLWIG, St. Francis Hospital, Wichita, Kan.: Normal and pathologic histology; clinical significance and operative treatment of anal ducts. Exhibit of photographs and photomicrographs showing anal ducts in the human fetus and the new-born, in the adult and in different animals; photomicrographs of infected anal ducts, anal fistula and periproctitic abscess; photographs of operative treatment of anal ducts.

Section on Radiology

Section exhibit committee: S. W. DONALDSON, chairman, Ann Arbor, Mich.; C. E. HUFFORD, Toledo, and E. P. MCNAMEE, Cleveland.

In addition to the radiologic exhibits listed, a large amount of radiologic material will be found in exhibits in other parts of the hall.

E. V. ALLEN and JOHN D. CAMP, Mayo Foundation for Medical Education and Research, Rochester, Minn.: Arteriography. Exhibit of roentgenograms made following injection of a radiopaque substances into the peripheral arteries of the living subject. Arteriograms revealing normal vessels, congenital variations and appearances in thrombo-angiitis obliterans, Raynaud's disease, scleroderma and arterial venous aneurysm will be shown together with a description of the technic of the method.

VINCENT W. ARCHER, S. D. BLACKFORD and J. E. WISLER, University of Virginia Hospital, University, Va.: Radiologic pulmonary observations in tularemia. Exhibit of reductions of chest films on a number of tularemia patients illustrating acute cases showing pneumonia, pleural effusion, marked bronchitis and nodular changes. Follow-up examinations over a period of months show residual pulmonary changes in many cases; a large percentage of the cases studied show definite pulmonary changes.

FRANKLIN B. BOGART, Pine Breese Tuberculosis Sanatorium, Chattanooga, Tenn.: Roentgenographic demonstration of early pulmonary tuberculosis showing necessity for repeated examinations in fulminating cases. Exhibit of roentgenograms of a small group of cases illustrating (1) the importance of roentgen examination of the chest in early minimal involvement; (2) that a small group of tuberculous cases with a fulminating type of the disease are coming to the radiologist and clinician so early in the disease that it is not possible to demonstrate the lesions radiographically or clinically, and yet in a short period of time an extensive lesion is shown.

SAMUEL BROWN, Jewish Hospital, Cincinnati: Abdominal tumors. Exhibit of roentgenograms illustrating (1) normal topographic relationship of the abdominal organs in the upright and prone anteroposterior and lateral positions, (2) anomalous positions of the abdominal organs of congenital and acquired origins, (3) differential diagnosis of abdominal tumors by the roentgenologic method.

JOHN D. CAMP, Mayo Foundation for Medical Education and Research, Rochester, Minn.: 1. Roentgenographic study of the osseous changes accompanying tumors of the spinal cord and associated soft tissues. Exhibit of roentgenograms and transparencies of gross specimen photographs illustrating the various bone changes associated with soft tissue tumors within the spinal cord. 2. Roentgenographic changes accompanying intracranial meningioma. Exhibit of roentgenograms and transparencies of photographs of gross specimens depicting the various osseous changes in the skull occurring as a result of a contiguous meningioma.

W. EDWARD CHAMBERLAIN and BARTON R. YOUNG, Temple University Medical School, Philadelphia: 1. Primary bone tumors. Exhibit of transparencies demonstrating cases of primary bone tumors. 2. Calcification (ossification) of normal laryngeal cartilages mistaken for foreign body. Exhibit of transparencies and diagrams illustrating varied types of laryngeal calcifications which may be confused with foreign body.

H. KENNON DUNHAM, Hamilton County Tuberculosis Sanatorium, Cincinnati: (*a*) Pulmonary emphysema with injection of iodized oil. Exhibit showing that pulmonary emphysema as a complication of arrested far advanced pulmonary tuberculosis is of both medical and economic importance. As a handicap it must be a factor in rehabilitation programs generally. (*b*) Conditions simulating pulmonary tuberculosis. Exhibit showing that nontuberculous cases are often sent in to a tuberculosis sanatorium and a knowledge of such conditions on the part of the general practitioner and the specialist is desirable.

PAUL C. HODGES, ALEXANDER BRUNSCHWIG and S. PAUL PERRY, University of Chicago, Chicago: X-ray wavelength and skin tolerance. Exhibit of charts, diagrams, pelts of experimental animals, and microscopic preparations. Demonstration of the fact that the degree of reaction to irradiation depends solely on the intensity of the dose and is independent of wavelength.

HOWARD B. HUNT and J. J. KEEGAN, University of Nebraska School of Medicine, Omaha: Radiographic and clinical correlation of meningeal tumors. Exhibit of plain roentgenograms, encephalograms and photographs of a few specimens, together with histories and operative observations on several proved cases of meningeal tumors.

JOHN S. LEWIS JR. and EDGAR C. BAKER, Youngstown Hospital Association, Youngstown, Ohio: Comparison of urinary tract in pregnancy and in the presence of pelvic tumors. Exhibit of prints from films of intravenous or retrograde pyelograms in cases of pregnancy or pelvic tumors, demonstrating that both conditions show comparable dilatation of upper urinary tract, and that various causes given for dilatation in pregnancy are not all assignable to tumors.

J. M. MARTIN and C. L. MARTIN, Baylor University Hospital, Dallas, Texas: Radiation therapy in oral malignant growths. Exhibit of photographs and drawings of actual cases of oral malignant growths illustrating in detail the macroscopic and microscopic appearance of these lesions at the time of treat-

ment, with later photographs showing the results of radiation treatment in each case.

GEORGE E. PFAHLER and JACOB H. VASTINE, Philadelphia: Roentgen diagnosis of tumors of the bladder and their serial study under treatment by irradiation. Exhibit of mounted roentgenograms ("pneumocystograms") showing the tumors, the infiltrating or noninfiltrating character and the disappearance of some of them under roentgen treatment.

Section on Miscellaneous Topics

Two subjects discussed by the Section on Miscellaneous Topics will be further illustrated in the Scientific Exhibit: "Nutrition," by an exhibit put on by a special committee (see Special Exhibits), and "Forensic Medicine," by a symposium composed of a group of exhibits on this subject. In addition there are a number of exhibits on varied topics dealing with different phases of medicine.

Symposium on Legal Medicine: The following three exhibits deal with different phases of medicolegal problems:

R. N. HARGER, Department of Biochemistry and Toxicology, Indiana University School of Medicine, Indianapolis: Chemical methods for detection of drunkenness. (*a*) Exhibit of automatic demonstration of the use of the "drunkometer," a device for detecting drunkenness by testing the subject's breath, accompanied by charts showing that this method is a practical substitute for blood or spinal fluid analyses. (*b*) Demonstration of a simple method of determining alcohol in body fluids and tissues. (*c*) Simple test for diagnosing methyl alcohol poisoning. (*d*) A method for analyzing an embalmed body to determine the existence of intoxication at the time of death.

TIMOTHY LEARY, Medical Examiner Service, Suffolk County, Boston: The relation of cholesterol to atherosclerosis. Exhibit of enlarged photomicrographs illustrating (*a*) human coronary sclerosis and (*b*) comparison of the lesions of human coronary and experimental rabbit atherosclerosis.

MASSACHUSETTS MEDICO-LEGAL SOCIETY, Gilman Osgood, President, Boston: Exhibit of photographs and documentary evidence dealing with various phases of medical jurisprudence.

WILLIAM BIERMAN and E. H. FISHBERG, Beth Israel Hospital, New York: Some physiologic changes occurring during hyperpyrexia induced by physical means. Exhibit of charts indicating changes in (*a*) chemistry of the blood, sweat and gastric contents; (*b*) agglutinating and complement fixing factors of the blood serum; (*c*) white cell count in the blood; (*d*) the blood velocity; (*e*) respiratory excursions; (*f*) skin surface temperatures; (*g*) sedimentation rates; (*h*) relationship between rectal and mouth temperatures, respiratory rates and pulse rates.

MAX CUTLER, Michael Reese Hospital, Chicago: Exhibit of stereophotographs, wax models and molds; charts, photographs and lantern slides illustrating the early diagnosis of cancer.

W. E. KENDALL, P. F. BROWN, L. H. PRINCE and J. W. TURNER, in collaboration with MAX CUTLER, Chicago, Veterans Administration Facility, Hines, Ill.: Early diagnosis and treatment of cancer of the skin and mouth. Exhibit of photographs, charts, colored lantern slides, models and gross specimens showing results of necropsy in neglected cases of melanoma and carcinoma of the skin and mouth.

GEORGE LEVENE, Evans Memorial for Clinical Research and Preventive Medicine, Massachusetts Memorial Hospitals, Boston: Mechanical hearts. Exhibit of a number of mechanical models, which reproduce the appearance of the heart as seen under the fluoroscope, showing the normal heart, sinus arrhythmia, extrasystoles, heart block, auricular fibrillation, thyrotoxicosis, coronary disease, aortic stenosis, aortic insufficiency and tricuspid insufficiency.

CHARLES J. SUTRO, Hospital for Joint Diseases, New York: Effect of chronic fluoride intoxication on teeth and bones. Exhibit of enlarged photographs and roentgenograms showing the various changes in the teeth and bones of fluoride-fed rats; histologic sections showing changes in long bones and teeth. Data and photographs will be presented of rats' teeth to disprove the statement that fluoride action depends on parathyroid dysfunction; similar evidence to disprove the fact that low calcium diet alone produces mottled enamel; roentgenograms of long bones of workers consuming cryolite (fluoride compound), showing advanced osteosclerosis.

GRANT E. WARD and J. MASON HUNDLEY JR., Baltimore: Combination treatment of cancer. Exhibit of (1) illustrations of patients before and after operation; photomicrographs for diagnosis and to show histologic changes in tissue; (2) motion pictures showing technic of electrosurgery; (3) demonstration of various types of electrosurgical apparatus; (4) wax models of cancer cases used especially for teaching purposes; (5) methods of radium therapy especially as applied to gynecology.

GROUP EXHIBIT, Department of Anatomy and Associated Foundations, Western Reserve University School of Medicine, Cleveland: Growth and repair. J. C. PLACAK: The prenatal environment. N. W. INGALLS: Stages in embryonic development, normal and abnormal. CARL C. FRANCIS: Growth in infancy and the preschool period. T. WINGATE TODD: Maturity levels in grade and high school periods. HARRY C. ROSENBERGER, B. HOLLY BROADBENT and OSCAR TURNER: Growth of the nasopharynx in the child. Y. A. VENAR: The rôle of vitamin D and amino-acids in skeletal growth. W. M. KROGMAN: Growth of the anthropoid. B. HOLLY BROADBENT: Roentgenographic measurement of dentofacial development growth. JOHN E. L. KEYES: Features of orbital growth. W. B. SEYMOUR JR.: The registration in the bones of constitutional handicaps. ELMER F. GOOEL: Muscular tone as expressed in the foot print. THEODORE A. WILLIS: The weight-bearing rôle of the leg muscles. L. DEWEY ANDERSON: The measure of psychomotor, social and intellectual development in young children. MARION N. GIBBONS: Osteochondritis and the growing child. W. KUENZEL: The reactions of the alimentary tract to different food substances. RUDOLPH S. REICH: The foot circulation. Repair in shoulder dislocation. C. GLENN BARBER: Repair as studied in amputation stumps. THEODORE T. ZUCK: The therapeutics of growth encouragement in retarded children. H. C. MOLOV and W. E. CALDWELL: Anatomic variations in female pelves. JOHN P. GARDINER: The ischialramic diameter.

Symposium on Amebiasis

Contributions to the Symposium on Amebiasis have been made by the Section on Gastro-Enterology and Proctology, the Section on Pathology and Physiology, the Section on Pharmacology and Therapeutics, and the Section on Preventive and Industrial Medicine and Public Health.

ARMY MEDICAL MUSEUM, United States Army, Washington, D. C.: Amebiasis. Exhibit of photographs and photomicrographs showing Endamoeba histolytica compared with other ameba; pictures showing histologic and pathologic phases of amebic dysentery compared with bacillary dysentery.

LEWIS B. BATES, LAWRENCE GETZ and WILLIAM M. JAMES, Medical Association of the Isthmian Canal Zone, Panama City: Diagnosis and pathology of human amebiasis with special reference to infestation with Endamoeba histolytica. Exhibit of (1) stool and culture preparations of the amebas of man, showing differentiation of species; (2) sections of tissue showing pathology of E. histolytica; (3) gross pathology of infestation with E. histolytica. The appearance of the intestinal amebas in preparations from the stool and the microscopic and gross pathology of the lesions will be especially illustrated.

FRANCIS BAYLESS, Institute of Pathology, Western Reserve University, Cleveland: Methods of cultivating Endamoeba histolytica. Exhibit and description of various types of mediums used in cultivation of Endamoeba histolytica, with demonstration of living cultures from laboratory and clinical sources.

MANFRED KRAEMER and MAURICE ASHER, Newark, N. J.: The diagnosis of amebiasis by the proctosigmoidoscopic method. Exhibit of charts and drawings showing method of making proctosigmoidoscopic examination; appearance of mucous membrane, showing area from which smear is made; sigmoidoscopic appearance of bowel in diarrheas that might be confused with amebiasis. Demonstration of warm stage examination of smear on a simple cheap rapidly constructed warm stage.

C. D. LEAKE, A. C. REED, H. H. ANDERSON and H. G. JOHNSTONE, Pacific Institute for Tropical Medicine in the Hooper Foundation for Medical Research and Department of

Pharmacology, University of California Medical School, San Francisco: The chemotherapy of amebiasis. Exhibit showing the requirements of an ideal drug for treatment of amebiasis. Laboratory criteria for evaluating relative merits of drugs proposed for use in amebiasis; toxic range of drug on single and repeated oral administration in various animals; rate of excretion, amebacidal concentration in vitro; effective range in natural balantidial infestation in guinea-pigs and in natural monkey amebiasis; controlled clinical trial. Results of a survey of (*a*) ipecac and kurchi alkaloids, (*b*) halogenated oxyquinolines, (*c*) organic arsenicals and (*d*) miscellaneous antiseptics.

THOMAS B. MAGATH, Mayo Clinic, Rochester, Minn.: Amebiasis in kittens. Exhibit of photographs and transparencies showing lesions in kittens suffering from amebiasis.

ISAAC D. RAWLINGS, Chicago Board of Health, Chicago: Amebiasis. The Chicago outbreak. Exhibit of charts showing carriers in the general population and among food handlers, and the cases and carriers found in the Chicago outbreak; working model showing cross connection between a safe and a polluted water supply; motion picture showing living amebas.

Symposium on Treatment of Burns

The Symposium on the Treatment of Burns is sponsored by the Section on Surgery, General and Abdominal, the Section on Practice of Medicine, and the Section on Pathology and Physiology. In addition to the exhibits there will be a motion picture program run on a definite schedule in an area adjoining the exhibits.

ROBERT HENRY ALDRICH, Boston: Gentian violet in the treatment of burns. Exhibit of photographs and charts of patients treated with gentian violet; charts showing bacteriology of burns; mortality before and after introduction of gentian violet; studies of fatal burns, showing increase in life expectancy with the use of gentian violet.

SAMUEL GORDON BERKOW, Perth Amboy General Hospital, Perth Amboy, N. J.: Classification, healing time and significant blood chemistry of burns. Exhibits of figures showing burns in adults and children, with charts showing method of estimating (1) percentage of body surface involved, (2) actual area involved; table computing healing time, based on area, depth of wound and age of patient (DuNouy and Carrel's equation); charts showing significant factors in blood chemistry in extensive burns, with special emphasis on those pointing to hypoepinephrinemia.

VILRAY P. BLAIR and J. B. BROWN, Department of Surgery, Washington University School of Medicine, St. Louis: Exhibit of photographs and mounted drawings on the treatment of full thickness skin losses resulting from burns.

D. M. GLOVER and A. F. SYDOW, St. Luke's and City hospitals, Cleveland: The repair of acquired skin defects. Exhibit of diagrams and photographs illustrating the problems in restoring large areas of skin destroyed by burns; the ideal method of skin transplantation; illustrations of the types of full thickness grafts in selected cases.

ROBERT KAPSINOW and S. E. KAPSINOW, Lafayette, La.: Extensive superficial burns. Exhibit of tables indicating use of hemoglobin readings and the value in prognosis; table showing effect of forcing fluids on blood concentration changes; graphs showing relation between hemoglobin, water intake and urine output in immediately and delayed treated cases, and rate of absorption from site of burn.

R. D. MCCLURE and C. I. ALLEN, Henry Ford Hospital, Detroit: The treatment of burns. Past and present methods. Exhibit of charts, photographs and motion pictures of past and present methods of treating burns, with a demonstration with material. Special attention is given to the discovery and development of the tannic acid treatment by the late Dr. E. C. Davidson.

GROVER C. PENBERTHY, Children's Hospital of Michigan, Detroit: Davidson method of treating burns by tannic acid. Exhibit of photographs and charts illustrating cases treated by means of tannic acid; a motion picture depicting method of treatment.

STANLEY J. SEEGER, Milwaukee Children's Hospital, Milwaukee: Prevention and treatment of burns. 1. Exhibit of dioramas, charts and posters showing the importance of prevention; common causes of burns in children; possibilities of educational work by hospital organizations; motion pictures on prevention of burns suitable for use before lay groups. 2. Exhibit of charts giving general outline of treatment; demonstration of method of applying tannic acid and the importance of p_H value of tannic acid solutions, illustrated by photographs and photomicrographs.

NORMAN TREVES and GEORGE T. PACK, Memorial Hospital for Cancer and Allied Diseases, New York: The development of cancer in burn scars. Exhibit of transparent illustrations and charts showing experience at the Memorial Hospital for Cancer; clinical photographs, photomicrographs, charts and illustrations showing methods of treatment and end results.

Motion Pictures: The following motion pictures will be shown on a definite schedule to be announced later:

D. M. GLOVER, Cleveland: "Tannic Acid Treatment of Burns." "Technique of the Thiersch or 'Split' Graft with Examples of the Results." "The Use of Full-Thickness Grafts—Free and Pedicled."

R. D. MCCLURE, Detroit: "Tannic Acid Treatment of Burns."

G. C. PENBERTHY, Detroit: "The Method of Treating Burns Used at the Children's Hospital of Michigan."

STANLEY J. SEEGER, Milwaukee: "The Prevention of Burns."

Diseases of the Thyroid

A number of exhibits dealing with various phases of the thyroid problem have been grouped together.

HERRMAN L. BLUMGART, J. E. F. RISEMAN, DAVID DAVIS and A. A. WEINSTEIN, with the surgical collaboration of DAVID D. BERLIN, Beth Israel Hospital and Harvard Medical School, Boston: Treatment of angina pectoris and congestive failure by total ablation of the normal thyroid gland. Exhibit of a study of a large number of patients with chronic heart disease, treated by total thyroidectomy; charts indicating the rationale of procedure, selection of cases, clinical course, technic of operation, postoperative management and complications, and mortality statistics; motion picture of operation and of patients before and after operation; data regarding changes in cardiac size and electrocardiogram, blood cholesterol, calcium phosphorus, studies on early relief of pain, exercise test used for diagnosis of angina, and preoperative and postoperative photographs will be shown.

JOSEPH FELSEN, Bronx Hospital, New York: Clinical types of thyroid dysfunction. Exhibit of mounted stained specimens with individual folders containing photomicrographs and summarized clinical data; individual graphs indicating iodine therapy, basal metabolic rate and postoperative course.

HAROLD L. FOSS and HENRY F. HUNT, Geisinger Memorial Hospital, Danville, Pa.: Diseases of the thyroid gland. Exhibit of photographs, goitrous thyroids mounted with photomicrographs, showing pathology of the condition and demonstrating various diseases affecting the thyroid gland; i. e., carcinoma, active suppurative and nonsuppurative thyroiditis, adenomatous goiter with and without systemic symptoms, and hyperthyroidism, or exophthalmic goiter.

G. ALLEN ROBINSON, New York: Differential diagnosis of tumors of the neck. Exhibit of photographs of benign, malignant, primary and metastatic conditions, including a classification of common and unusual tumors; method of diagnosis and treatment of various neoplasms will be indicated.

WILLARD O. THOMPSON, PHEBE K. THOMPSON, S. G. TAYLOR III and S. B. NADLER, Rush Medical College of the University of Chicago, Presbyterian and Cook County hospitals, Chicago: The pharmacology of the thyroid in man. Exhibit of charts to correlate (1) the more important facts concerning iodine in relation to the treatment of goiter; (2) the comparative calorigenic effects, in myxedematous man, of most substances known to affect the basal metabolism.

GROUP EXHIBIT, Cleveland Clinic Foundation, Cleveland: Diseases of the thyroid. R. H. NICHOLS, E. L. SHIFLETT and R. S. DINSMORE: Roentgen studies of the thyroid. D. ROY

McCULLAGH: Iodine studies in hyperthyroidism. E. PERRY McCULLAGH: Hypothyroidism. A. C. ERNSTENE: The heart in hyperthyroidism. R. S. DINSMORE: Technic of thyroid surgery. U. V. PORTMAN: Malignant goiter. ALLEN GRAHAM: (1) Gross pathology of the thyroid. (2) Microscopic pathology of the thyroid. A. D. RUEDEMANN: Exophthalmos. G. W. CRILE: End-results of thyroid surgery.

EDUCATIONAL CLASSIFICATION

Government and National Organizations

The educational exhibits include those exhibits from national and state organizations and government institutions which are put on in the name of the institution rather than of individuals, and which are intended to show progress in the particular activities with which those institutions deal.

AMERICAN ASSOCIATION OF HOSPITAL SOCIAL WORKERS, Chicago: Some contributions of social work to the care of ill health. Exhibit of material on social factors in disease as found by social workers in various hospitals and outpatient departments of the country.

AMERICAN COMMITTEE FOR THE CONTROL OF RHEUMATISM, Philadelphia: Chronic arthritis. Exhibit of moulages, old books and charts together with a motion picture on chronic arthritis.

AMERICAN HEART ASSOCIATION, New York: Arteriosclerotic heart disease. Exhibit will cover diagnosis, taking into consideration history, physical, roentgen and electrocardiographic observations; the relationship and differentiation between angina pectoris and coronary occlusion; prognosis and treatment.

AMERICAN HOSPITAL ASSOCIATION, Chicago: Hospital construction, equipment and administration. Exhibit of statistical graphs, package libraries, transparencies, and other material that is informative to the hospital field and members of medical staffs of hospitals.

AMERICAN PHARMACEUTICAL ASSOCIATION, Baltimore: The National Formulary. Exhibit showing the use of the National Formulary in hospitals, with emphasis on the use of N. F. drugs, chemicals, preparations and prescriptions.

AMERICAN SOCIAL HYGIENE ASSOCIATION, New York: Treatment of syphilis. Exhibit of cooperative clinic studies as follows: Johns Hopkins University, JOSEPH EARLE MOORE; University of Pennsylvania, JOHN H. STOKES; Mayo Clinic, PAUL A. O'LEARY; Western Reserve University, HAROLD N. COLE; University of Michigan, UDO J. WILE, in cooperation with TALIAFERRO CLARK, United States Public Health Service.

AMERICAN SOCIETY OF CLINICAL PATHOLOGISTS, Denver: Registration of laboratory technicians. Exhibit of charts showing distribution of laboratory technicians, photographs and placards illustrating the work of the board of registry and the American Society of Clinical Pathologists.

CHICAGO MUNICIPAL TUBERCULOSIS SANITARIUM, Pneumothorax Clinic, Chicago: Collapse therapy in pulmonary tuberculosis. Exhibit of roentgenograms showing indications for collapse, technic, complications and results. Correlated pathologic exhibit showing the relationship between roentgenograms and the actual pathologic conditions, as demonstrated by lung specimens.

CLEVELAND RADIOLOGICAL SOCIETY, Cleveland: History and progress of radiology. Exhibit of prints and actual material showing early work in roentgenology; a demonstration of the various roentgen examinations that can be made in the investigation of a particular patient for a particular pathologic condition.

HEART COUNCIL OF GREATER CINCINNATI, Cincinnati: Studies of cardiovascular disease. Exhibit of charts, graphs, electrocardiographic tracings, radiograms and specimens resulting from research studies conducted by the staff of the Heart Council of Greater Cincinnati.

MUSEUM OF HISTORICAL AND CULTURAL MEDICINE, CLEVELAND MEDICAL LIBRARY ASSOCIATION, Cleveland: Exhibit of a collection of monaural stethoscopes.

NATIONAL BOARD OF MEDICAL EXAMINERS, Philadelphia: Exhibit of charts describing the work and progress of the National Board of Medical Examiners.

NATIONAL TUBERCULOSIS ASSOCIATION, New York: Pathologic sequence of pulmonary tuberculosis. Exhibit of roentgenograms illustrating successive steps in the development of pulmonary tuberculosis from primary complex to chronic widespread pulmonary involvement. Motion picture of thoracoplasty operation and results.

UNITED STATES PHARMACOPEIAL CONVENTION, Washington, D. C.: The United States Pharmacopeia. Exhibit showing the use of the Pharmacopeia in hospitals, with emphasis on the use of U. S. P. drugs, chemicals, preparations and prescriptions.

VETERANS ADMINISTRATION, Medical and Hospital Service, Washington, D. C.: Clinical and postmortem observations in a group of veterans with cardiovascular disease. Exhibit of graphs and statistical tables showing postmortem observations in veterans with heart disease; heart disabilities will be classified according to etiologic factors, anatomic types and abnormal physiology; the postmortem data will include information on anatomic types of cardiovascular disease, the coexisting general diseases, and data on age and race.

AMERICAN MEDICAL ASSOCIATION

The exhibits from the headquarters group of the American Medical Association will be found in various parts of the hall.

BUREAU OF HEALTH AND PUBLIC INSTRUCTION: Professional participation in public health effort. Exhibit of maps indicating state and county societies showing noteworthy activities in health education and medical participation in public health work by state and county medical societies.

COUNCIL ON MEDICAL EDUCATION AND HOSPITALS: Exhibit of charts showing the leading facts of importance regarding medical education, licensure, internships and residencies; status of listing of specialists; latest available data on hospital occupancy and other hospital statistics.

COUNCIL ON PHARMACY AND CHEMISTRY, CHEMICAL LABORATORY, BUREAU OF INVESTIGATION and COMMITTEE ON FOODS: These will present collective exhibits to illustrate the weaknesses of the present National Food and Drugs Act, and to emphasize the urgent need for more comprehensive national food and drug legislation in the public interest.

COUNCIL ON PHYSICAL THERAPY: Exhibit of motion pictures, charts, instruments and simple equipment designed to substantiate the physiologic effects of physical therapy procedures employed in the practice of physical therapy, including such therapeutic procedures as heat, massage, therapeutic exercise and hydrotherapy.

AWARDS

There will be two classes of awards, consisting each of (*a*) a gold medal, (*b*) a silver medal, (*c*) a bronze medal and (*d*) three certificates of merit.

NOTE.—The special (subsidized) exhibits (Encephalitis Exhibit, Nutrition Exhibit and demonstrations in Pathology) and the exhibits of the headquarters of the American Medical Association are not open to awards.

CLASS I

Awards in class I are made for exhibits of individual investigations which are judged on basis of originality and excellence of presentation.

CLASS II

Awards in class II are made for exhibits which do not exemplify *purely experimental studies*, which are judged on the basis of excellence of correlating facts and excellence of presentation.

Medals are awarded only to individuals. A special certificate of merit will be awarded to the best educational exhibit in the Educational Classification (this includes exhibits by national organizations, and the like). The decisions of the Committee on Awards will be final and will not be subject to review.

The Committee on Awards will be composed of five persons. It will make its decisions on Wednesday. The names of the Committee on Awards will not be available until after the decisions have been published.

THE BILLINGS MEDAL

The late Dr. Frank Billings, during his lifetime, as one of the leaders of the American Medical Association was responsible more than any other individual for stimulating the scientific exhibit idea and encouraging the progress of this work both in and out of the meetings and assemblies of the Association.

The exhibit was started in 1899 at the Columbus session through the activities of the Indiana State Medical Association. A pathologic exhibit was the feature of the exhibit and was continued as such for the next several years under the supervision of the then newly formed Section on Pathology and Bacteriology, with the active cooperation of Dr. Frank B. Wynne, as chairman of the committee. In 1903, under the presidency of Frank Billings, the exhibit was broadened in scope to include all phases of scientific medicine, and hence was named Scientific Exhibit.

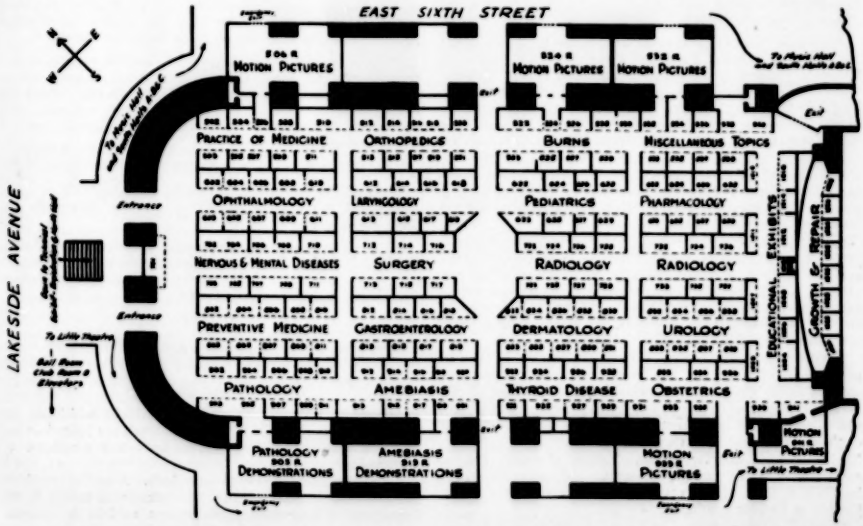
Awards of medals and certificates were first made to the best exhibits shown in 1908. When this proposition was presented to the House of Delegates when it met the previous year, it was the influence of Frank Billings that prevented the matter from dying without action.

A crucial period of the Scientific Exhibit came in 1920. For several years the direction of the exhibit had been passed around from one person to another, with a lagging interest and enthusiasm. The Board of Trustees took an active interest in the problem and authorized a committee to prepare "plans for increasing the attractiveness of the Scientific Exhibit." Dr. Frank Billings and Dr. D. Chester Brown were made members of this committee. At this time there was almost no appropriation for the Scientific Exhibit and requests for additional funds were at first denied. Dr. Billings continued his interest in the Scientific Exhibit almost up to the time of his death.

There have been numerous men who have made valuable contributions to the Scientific Exhibit in the past thirty-five years. But Frank Billings, not only by his standing in the medical world but also by his ceaseless labor for the betterment of scientific medicine, contributed so much to the development of the Scientific Exhibit that the use of his picture on the medal, which is awarded annually in the Scientific Exhibit, is a compliment to the standing of the Scientific Exhibit and an expression of lasting appreciation for his inspirational leadership.

FLOOR PLAN OF SCIENTIFIC EXHIBIT

The Scientific Exhibit, located on the Arena Floor of the Cleveland Public Auditorium, will be the largest in the history of the Association. The quarters are adequate, however, to accommodate both the exhibition and the visitors, and provision has been made for seating arrangements at frequent intervals throughout the hall.



Sixteen sections of the Scientific Assembly are taking an active part, details of which have been given in the preceding pages. Special section exhibit committees have been engaged in selecting the best material possible in the various specialties. A large number of the papers read before the sections will be further illustrated in the Scientific Exhibit, thus making it possible for the physician who has heard the paper read to study the subject further at his leisure and to ask questions of the author.

Motion picture programs will be shown on definite schedules in areas provided for the purpose, directly adjacent to the section exhibits, by the Section on Practice of Medicine and the Section on Obstetrics, Gynecology and Abdominal Surgery. Additional motion pictures will be shown on burns in an area adjacent to the symposium on burns, while a large number of motion pictures will be shown in individual booths.

THE TECHNICAL EXPOSITION

Difficult business conditions during the past few years have served as a challenge to inventive genius and research in practically every line of industry.

How this challenge has been courageously met and accepted by those firms which cater to physicians' needs will be concretely demonstrated in the exhibits of the Technical Exposition of the Cleveland Session. The occurrence and recurrence of the word "new" throughout the exhibit descriptions on the following pages is indeed significant. It is not an idle repetition, but an indication that scientific research has gone on despite adverse economic conditions, and that medical firms have increased their usefulness to the profession in manifold ways by developing new products or services.

It is this ability to impart new ideas, furnish new suggestions or demonstrate new methods that makes the Technical Exposition of pronounced educational value to the visiting physician. In a short amount of time, he can acquire a first-hand acquaintance with the latest developments of firms located in widely separated parts of the country.

But, while new instruments and apparatus, new books, new dietetic products, new medicinal preparations will be found on all sides, it should be remembered that exhibitors are also present to impart useful information regarding the standard and longer used articles. The Exposition as a whole represents practically all of the important products used in the practice of medicine. With almost 175 firms participating, and with all exhibits conveniently arranged on the lower level of the Auditorium, every minute of time spent in the Technical Exposition can be made stimulating and profitable. The Registration Bureau, the Postoffice, Lounge, Ticket Validation counter and several Section Meeting Halls will be found on this same level. Attendants with specialized knowledge in their respective fields will be in charge of the booths. Courteous treatment without undue urging to buy may be expected.

The exhibits will be open from 8:30 a. m. to 6:00 p. m. each day, except on Friday, when the closing hour will be at noon. The descriptions of the individual exhibits that follow are arranged alphabetically by firm names to facilitate easy reference.

WILL C. BRAUN,
Superintendent of Exhibits.

ABBOTT LABORATORIES
Haliver Oil Products

Since nutritional factors, as never before, are engaging the attention of the forward-looking physician, Haliver Oil Products will occupy a prominent place in the Abbott exhibit, Booth 66. Chemical, sales and clinical research men will be in attendance and will be glad to discuss the numerous Council Accepted Abbott products with you. Pollen Extracts and charts of the pollen incidence in your own locality will also be featured. Call and place an order for your quart, which will be furnished free of charge.

ADLANCO X-RAY CORPORATION
Ultra-Short Wave Therapy

Several types of Ultra-Short Wave and Short Wave apparatus will be exhibited in Booth 186 by the Adlanco X-Ray Corporation, pioneers in this new therapy. Trained men will be on hand to explain the apparatus, which is new to many members of the profession. The mastery of short electrical waves from 30 to 10 meters, and especially of ultra-short waves from 10 to 3 meters, has introduced a new and important factor in physio-therapy, and the results obtained will be discussed at this exhibit.

W. D. ALLISON COMPANY
New Pediatric Table

The new Allison-Ramsay Pediatric Table will be shown for the first time at an A. M. A. meeting, by the W. D. Allison Company, manufacturers of physicians' wood furniture for the past fifty years. Many other late models of doctors' treatment room furniture, outstanding in quality and reasonable in price, will also be exhibited in Booth 94. The salesmen in charge will be glad to explain in detail the features of this fine furniture.

A. S. ALOE COMPANY
Cold Ray Quartz Ultraviolet Lamp

A striking feature of the Aloe exhibit, Booth 33, will be the new Cold Ray Quartz Ultraviolet Lamp which has recently been accepted by the Council on Physical Therapy. This unit has been carefully tested in various clinics and has satisfactorily met all requirements. Another feature of this exhibit will be Stille Rustless instruments at a special discount. A full line of surgical instruments, hospital and office furniture, and physical therapy apparatus will be shown also.

AMERICAN OPTICAL COMPANY
New Improved May Ophthalmoscope

Important among the ophthalmic diagnostic instruments the American Optical Company will show in Booths 128 and 129, will be the new improved May Ophthalmoscope. This instrument presents: a totally reflecting prism which bends the light instead of reflecting it, eliminating shadows and reducing corneal reflexes to a minimum; the convenient "bayonet method" of attachment; and a uniform round light controlled by a rheostat. Other new and important developments in eye, ear, nose and throat diagnostic instruments will be shown.

D. APPLETON-CENTURY COMPANY
Entire Line to Be Shown

Included in their entire standard line of medical works to be displayed by D. Appleton-Century Co. in Booth 45, will be the 6 published volumes of their "Practitioners Library of Medicine and Surgery." These will give a clear idea of the scope of the Library, which is being supervised editorially by Dr. George Blumer. New editions will be shown of Holt and Howland's "Diseases of Infancy and Childhood" (revised by Holt and McIntosh), Barron and Yater's "Symptom Diagnosis," and Zinsser and Bayne-Jones' "Textbook of Bacteriology." A new work to be shown is Wolf's "Textbook of Physical Therapy."

ARMOUR AND COMPANY
Sources of Gland Preparations

Armour and Company's exhibit, Booth 26, will be more than just a display of products. It will depict the sources of various pharmaceuticals, surgical ligatures, etc.—all in meat animals. Along with a vial of pituitary liquid will be the glands from which the substance is extracted. Thyroid glands from the throats of cattle, sheep and hogs will illustrate the source of many thyroid preparations. Dozens of other exhibits of this nature will be shown, and competent men will be in attendance.

AZNOE'S
Medical Personnel Bureau

Aznoe's, the first medical personnel bureau (established in 1896), will be represented in Booth 153 by the director, Mrs. Bates. She will be pleased to explain to anyone seeking assistants, how Aznoe's can be of service; and to those persons who are looking for a change, a location, or a salaried appointment, she will be glad to tell how Aznoe's nation-wide service can assist them.

BATTLE CREEK FOOD COMPANY
To Show Savita

Be sure to stop at Booth 27 for a treat! The Battle Creek Food Company will serve sandwiches spread with Savita, a yeast extract resembling meat but having the properties of pasteurized brewers' yeast.

W. A. BAUM COMPANY, INC.
Train Model of Duralumin

W. A. Baum Company will exhibit a large model of the Union Pacific's new high-speed train at Booth 28, emphasizing the utility of Duralumin. Both the train and the new Kompak Model Lifetime Baumanometer are built of Duralumin, the copper-aluminum alloy possessing the strength of steel with only one-third the weight.

BAUER & BLACK
Research Results to Be Shown

The results of a basic research program instituted by Bauer & Black more than five

years ago will be shown in Booths 122 and 123, where adhesive plaster, sutures, absorbent cotton, gauze bandages, elastic stockings, Handi-Cast plaster of paris bandages, suspensories, Handi-Tape dressings, and athletic supporters with demonstrable improvements will be exhibited. Bauer & Black's research has not been confined to the laboratory, but has gone into the field as well. This has resulted in a suspensory guide which will be available to physicians at the exhibit.

BAUSCH & LOMB OPTICAL COMPANY
Microscope for Laboratory Work

One of the instruments which will be shown by the Bausch & Lomb Optical Co. in Booth 6 is the model HA Physicians' and Medical Students' Microscope. You are invited to inspect this instrument, which is superior for laboratory use because of its weight, balance and stability. Note that its newly designed mechanical stage permits the systematic examination of the entire surface of a 75mm. x 50mm. slide.

BECTON, DICKINSON & CO.
New Automatic Hypodermic

Becton, Dickinson & Co. will display the new B-D Busher Automatic Injector, a self-injecting hypodermic unit which relieves nervous uncertainty; also the new B-D Blood Transfusion Outfit which simplifies transfusion to a one-man operation; and the new style Utility Manometer for hospital and office use. Other B-D products, many of them improved, will be displayed and information given concerning them by attendants in Booths 37, 38, 39 and 40.

BILHUBER-KNOLL CORPORATION
Diladid, the New Morphine Derivative

In Booth 24, the Bilhuber-Knoll Corporation will display Diladid, the morphine derivative, and offer evidence of its advantages as an analgesic in painful conditions and as a cough sedative. Among other products shown will be Theocalcin, the diuretic and myocardial stimulant indicated in congestive heart failure and angina pectoris; Metrazol, the circulatory and respiratory restorative, and also Bromural and Eurecol. Well informed representatives will be glad to give interested physicians detailed information on these products.

BOVRIL OF AMERICA
A Famous Rich Beef Drink

Bovril, a highly concentrated beef extract scientifically combined with highly concentrated extract of fresh brewers' yeast, has been prescribed by eminent British and continental physicians for nearly half a century. Bovril has been accepted by the Committee on Foods of the A. M. A. and its vitamin B potency is recognized by the Privy Council for Medical Research in England. It will be demonstrated in Booth 142, where physicians may obtain descriptive literature.

P. BLAKISTON'S SON & COMPANY, INC.
To Show Series

"The Recent Advances in Medicine" Series present in concise, well written volumes the newer things in the various fields of medicine. This series, which has been augmented by several new volumes and new editions, will be shown with other desirable books in Booth 78, occupied by P. Blakiston's Son & Co., Inc.

BUCK X-OGRAPH COMPANY
Developments in X-Ray Supplies

If you are interested in x-ray work, either from the standpoint of improving your present equipment or of purchasing new, you will find something of value in Booth 195. The Buck Company will show some innovations in the manufacture of developing tanks and illuminators, and will also have an attractive display of other items necessary to complete the modern x-ray darkroom.

BURDICK CORPORATION
Physical Therapy and Electrosurgery Equipment

In Booth 68, The Burdick Corporation will exhibit a complete line of modern physical therapy and electrosurgery equipment. In the physical therapy field it will feature the Council Accepted D-2 Diathermy, Anniversary Ultra-violet Lamp and Dual Aoalite. For electrosurgery, the products of greatest interest will be the SU-2 blended current Electrosurgical unit and the new D-3 machine for electrocoagulation.

CAMERON SURGICAL SPECIALTY COMPANY
New Electrically Lighted Instruments

Cameron Surgical Specialty Company will display a complete line of their electrically lighted Surgimed instruments, for diagnostic and operative use. Their new colposcopic instrument, the Tele-Vaginalite, will be shown in three sizes with 10x Telescope. They will also show the Cameron Cauterodyne, the original portable Radio Knife with the new handle current control, which is one of the noteworthy innovations of electro-surgery offering complete assurance of safety when cutting in a wet field and is particularly adapted to the prostatic resection operation. Booth 105.

CARNATION COMPANY
To Demonstrate Soft-Curd Milk

How the curds of various forms of milk are acted upon by an artificial gastric juice will be shown in Booths 154 and 155 by the Carnation Company, producers of Carnation Evaporated Milk. The effect of homogenization on the size of the fat globules in this milk will also be demonstrated. Carnation officials state that an important product improvement, of special interest to pediatricians, will be given publicity at this time.

S. H. CAMP & COMPANY
New Designs for Supports

Complete information on the latest developments of Camp Anatomical Supports will be given at Booth 65 by representatives of S. H. Camp & Company. Latest designs for prenatal and postoperative viscerotposis, and hernia, together with sacro-iliac, dorsolumbar, and lumbosacral supports will be of interest to attending physicians.

WILMOT CASTLE COMPANY
Three New Sterilizers

The modern trend in sterilizer design will be shown by three new sterilizing outfits which the Wilmot Castle Company will display in Booth 126. One is a new popular priced instrument sterilizer and cabinet, in which the instrument sterilizer is recessed and operated by a foot lift. This new model will be priced even lower than the older type cabinet with sterilizer at the side. Another model is a new specialists' outfit, and the third is a complete small pressure equipment for clinics and small hospitals. You are invited to examine them.

CHAMBERLIN METAL WEATHER STRIP CO.
Weather Strips and Screens

Visit Booth 183 and examine the interesting display of fuel saving equipment made by the Chamberlin Metal Weather Strip Co. If you will leave your name and address for a heat loss survey of your home or building, it will be given to you and carefully explained when computed—with the firm's compliments and no obligation on your part.

CHAPPEL BROS., INC.
Will Exhibit Liver Extracts

Complete maintenance charts of pernicious anemia patients carried through for over two years with Chappel's Liver Extracts will be shown in Booth 193 by the Chappel Bros. Laboratories. Chappel's Oral Liver Extract is a palatable, highly purified liquid of reliable potency which is under constant hospital control. The injectible form is sufficiently refined to permit subcutaneous use without hazard. Each batch is tested for potency before being released for sale. Competent detail men will be in attendance.

CIBA COMPANY, INC.
An Effective Amebicide, Vioform

The recent publicity on amebiasis has caused many physicians to seek new agents to combat this disease. Vioform, "Ciba," through the efforts of Leake et al., has proved to be one of the most effective amebacides. A special display of Vioform is included among the scientific exhibitions. In Booth 85 the Ciba Company, Inc., will feature not only Vioform, but also Digifoline, Dial, Nupercaine, Lipolodine and Atoquinol.

CHURCH & DWIGHT COMPANY, INC.
Sodium Bicarbonate

The exhibit of Church & Dwight Company, Inc., in Booth 150 will emphasize the pu-

CLEVELAND PUBLIC AUDITORIUM

(Diagrammatic Cross Section)

Showing Location of Section Meetings, Scientific Exhibit, Technical Exhibit

rity, availability, and low cost of Arm and Hammer and Cow Brand Baking Sodas. These products, which are identical, are Sodium Bicarbonate U. S. P. Physicians will be interested in them as their cost is extremely low and they are available in nearly every household. The booth will be of early American design, simple and dignified, and symbolizing the age when this firm began the manufacture of these brands of Sodium Bicarbonate in 1846.

HAROLD H. CLAPP, INC.

Strained Baby Foods

The new Enamel Purity Pack of Clapp's Strained Baby Foods was first announced to the medical profession at the Milwaukee meeting last year. That the profession approved has been made evident during the ensuing months. This package, together with the original glass line, will be exhibited by Clapp in Booth 110.

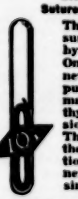
WARREN E. COLLINS, INC.

Combination Respirator-Incubator

The latest models of the Drinker Infant Respirator, Burgess Collins Oxygen Tent and Benedict-Roth Metabolism apparatus will be displayed by Warren E. Collins, Inc., in Booth 5. The combination respirator-incubator has new improvements of interest. The oxygen tent, which operates on an entirely new principle, cuts oxygen therapy costs in half. The new Benedict-Roth has many new features which add to the patient's comfort and the ease of operation. See these demonstrated.

DAVIS & GECK, INC.

Sutures for Special Purposes



Their complete line of sterile surgical sutures will be shown by Davis & Geck in Booth 131. On display, also, will be several new items, including special purpose sutures with atraumatic needles affixed for tonsil, thyroid, obstetrical, circumcision, plastic and eye work. They will show films from their Library of Surgical Motion Pictures, to which many new subjects have been added since last year.

DAVIES, ROSE & COMPANY, LTD.

Pharmaceutical Preparations

Physicians prescribing preparations made by Davies, Rose & Co., Ltd., can be assured of uniformity and dependability, maintained by laboratory determination and supported by clinical experience. A visit to this firm's exhibit in Booth 40 should prove of interest to visiting physicians.

R. B. DAVIS COMPANY

Will Serve Cocomalt

Visit Booth 70 and be served with Cocomalt, a popular food drink supplying rich calcium, phosphorus, and vitamin D content in a particularly delicious form. Miss Elsie Stark, director of the home economics department of the R. B. Davis Company, will be in charge of the Cocomalt booth. New Food Value Charts (calcium, phosphorus, vitamin D and caloric value) will be available for those who desire them.

F. A. DAVIS COMPANY

"The Cyclopedia of Medicine"

Seven hundred carefully selected physicians and surgeons from all civilized countries have produced, under George Morris Piersol, "The Cyclopedia of Medicine" in 12 volumes. Ten of these are now ready and may be examined at the F. A. Davis Company's exhibit. This notable work covers every phase of internal medicine, major and minor surgery, and all the specialties, and a supplementary volume issued yearly keeps the Cyclopedia always up-to-date. Other standard works on various branches of modern medicine and surgery will also be displayed. Booth 73.

DE PUY MANUFACTURING COMPANY

Improvements in Fracture Appliances

Some of the most advanced improvements in fracture appliances will be shown by the De Puy Manufacturing Company in Booth 58. One feature is the new Granberry Hyperextension Frame, which will fit on any hospital bed, and which permits the surgeon to get direct hyperextension immediately beneath the point of fracture of any vertebra between the shoulder and the pelvis. Also on display will be the Forester Head Sling, the Campbell Aeroplane Splint, the Granberry Arm Reduction Frame, the Leiter Rocking Leg Splint, the De Puy Portable Fracture Table, the Neubleer Adjustable Forearm Splint, the Key's Kirschner Bow and the Weil Leg Splint.

DETROIT COVER COMPANY

New Inhalant Device

There is considerable discussion of Arizon, the new inhalant device for use as an adjunct to the treatment of disorders of the nasal and respiratory tracts. This instrument, which recently was accepted by the Council on Physical Therapy, will be the attraction in the exhibit of the Detroit Cover Company, Booth 146. Arizon provides a direct means of reaching the nasal passages and lungs with medicated vapor or dry heat. A mask fits tightly over the nose and mouth and is connected with a heat and vapor chamber. All inhaled air is drawn through a heating element.

DO/MORE CHAIR COMPANY

Correct Posture Chairs

Attending pediatricians will be especially interested in Booth 165, where Do/More will show the new Correct Posture Baby High Chair and a Maternity Chair, both developed by Dr. J. H. Garner. A Do/More representative will be glad to discuss the favorable posture results secured by other types of these chairs for seated employees and executives in offices and factories.

DE VILBISS COMPANY

Nasal Guard for Atomizer

A complete line of atomizers and vaporizers for home and professional use will be displayed in Booth 43 by The DeVilbiss Company. A prominent feature of the exhibit will be the recently developed DeVilbiss Nasal Guard, which prevents any excess pressure in the nasal passages during prescribed self-treatment. All visitors are cordially invited to visit the DeVilbiss display.

DUKE LABORATORIES, INC.

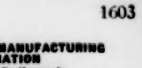
Will Distribute Nivea Creme

Physicians' wives, golfers, bathers, motorists, sailors, aviators, and all those in need of an emollient cream for skin comfort, protection and cleansing, will find tubes of the familiar Nivea Creme awaiting them at Booth 7. The Duke Laboratories, Inc., will also have on display the new liquid cream, Nivea Skin Oil.

DU PONT FILM MANUFACTURING CORPORATION

To Feature Radiographs

The DuPont Film Manufacturing Corporation invites you to visit Booth 206 and inspect the display of radiographs, representative of its X-ray film which is particularly suitable for summer use.



EARNSHAW KNITTING COMPANY

New Vanta Developments

Nurse Hubbard will be at Booth 18 to show you the Vanta Baby Garments, manufactured by the Earnshaw Knitting Company to conform to the ideas of doctors, nurses, and hospitals. Every effort is made to have the garments absolutely safe for baby and convenient for the mother. All layette sizes are sterilized in regular hospital apparatus. This company originated dressing babies without pins or buttons, "Self-Help" garments, sun suits, and many of the things that have aided the physician to bring health and comfort to the baby.

EASTMAN KODAK COMPANY

Infra-Red Clinical Photography

On account of the diagnostic possibilities of infra-red clinical photography, you will be interested in the display of the Eastman Clinical Camera Outfit, which is ideally suited to this purpose. Besides an exhibit of radiographs made on Eastman Ultra-Speed Safety X-ray Film, there will be distributed to members of the profession authoritative texts on the subjects of photography and radiography. Medical Division representatives of the Eastman Kodak Company will gladly answer questions regarding your radiographic or photographic problems, and demonstrate any of the equipment on display in Booths 198 and 199.

ELECTRO SURGICAL INSTRUMENT COMPANY

Now Electrically Lighted Instruments

You are invited to see the demonstration of new electrically lighted surgical instruments by the Electro Surgical Instrument Company in Booth 194. A complete line of cautery transformers, electrodes and accessories will also be on display. Of great interest to the bronchoscopist will be the bronchoscopic instruments constructed of an entirely new non-corrosive metal which requires no plating and always retains its luster, and cannot be bent or crushed by the patient's teeth while in use.

J. H. EMERSON

Will Exhibit New Products

A syringe blood transfusion apparatus, an automatic temperature control for intravenous injection, an apparatus for recording photographically the sedimentation rate of blood (up to ten determinations simultaneously), and an inexpensive design of negative pressure chamber for treating peripheral vascular diseases, will be shown by J. H. Emerson in Booth 149. Latest designs of his familiar products will also be exhibited: the Barcroft-Warburg and other research apparatus; simple, portable oxygen tents; and adult and infant respirators.

List of Exhibitors

Firm Name	Space No.
Abbott Labs., North Chicago, Ill.	66
Adiance X-Ray Corp., New York	166
Allison Co., W. D., Indianapolis	94
Aloe Co., A. S., St. Louis	33
A. M. A. Periodicals and Books	171
Amer. Cystoscope Makers, Nine York	205
Amer. Hosp. Supply Corp., Chicago	188
Amer. Optical Co., Southbridge, Mass.	128-129
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Armand Company, The, Des Moines, Iowa	168
Armour and Company, Chicago	26
Arnoe's, Chicago	153
Battle Creek Food Co., Battle Creek, Mich.	37
Bauer & Black, Chicago	122-123
Baum Co., Inc., A., New York	28
Bausch & Lomb Opt. Co., Rochester, N. Y.	6
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Betz Co., F. S., Hammond, Ind.	69
Bilhuber-Knoll Corp., Jersey City	24
Blakiston's Son & Co., Philadelphia	78
Bovril of America, Camden, N. J.	142
Buck X-Ograph Co., St. Louis	195
Burdick Corp., Milton, Wis.	68
Cambridge Instr. Co., New York	8
Cameron Surg. Spec. Co., Chicago	105
Camp & Co., S. H., Jackson, Mich.	65
Carnation Co., Oconomowoc, Wis.	154-155
Castle Co., Wilmot, Rochester, N. Y.	126
Chamberlin Metal Weather Strip, Detroit	183
Chappel Bros., Inc., Rockford, Ill.	193
Chicago Medical Book Co., Chicago	136
Church & Dwight Co., New York	150
Ciba Co., Inc., New York	85
Clapp, Harold H., Rochester, N. Y.	110

ENOCHS MANUFACTURING COMPANY
To Exhibit New Modern Suite

You are invited to inspect the new Modern suite of physicians' office furniture displayed by the Enochs Manufacturing Co. in Booth 111. It is designed for this "stream-lined" age, yet there is nothing freakish or bizarre about it.

H. G. FISCHER & COMPANY
Electrotherapeutic Demonstrations

Three interesting pieces of apparatus in the exhibit of H. G. Fischer & Co. will appeal to physicians interested in electrotherapeutic equipment. These are the new Fischer Short Wave High Frequency Apparatus, the new Fischer 60-88 Universal Shock-proof Diagnostic X-ray, and their model H Diathermy and Electrocoagulation Unit, recently accepted by the Council on Physical Therapy. See these demonstrated in Booth 55.

FORM PUBLISHING COMPANY
Collens Diet Calculator

The Form Publishing Company will have available in Booth 158 the Collens Diet Calculator, which has been accepted by a large majority of practicing physicians in the U. S. as the most important and practical aid in writing any caloric diet in medicine. It contains 1806 menus on one chart and can be used in diabetes, cardiorenal disease, nephrosis and epilepsy. They will also show the new Collens Obesity Diet Chart which contains 100 reducing diets on one chart.

E. FOUGERA & COMPANY
Will Display Lipiodol

A cordial invitation is extended to all physicians to visit the display of this firm which, for 85 years, has been supplying American physicians with outstanding French, Swiss and English pharmaceuticals. The display will feature Lipiodol, an iodized oil designed for lipodiagnosis and as a substitute for inorganic iodides. Pictures will demonstrate its application to the central nervous system, respiratory tract, utero-tubal exploration, and the accessory nasal sinuses, and detailed information will be given concerning Lipiodol as an opaque contrast medium for radiographic diagnosis. Booth 109.

GEBAUER CHEMICAL COMPANY
Ethyl Chloride C.P.

Gebauer's Ethyl Chloride C.P. will be exhibited in Booth 147. Physicians are invited to inspect the metal tube in which it is supplied, and which is equipped for either spray or drop administration.

GENERAL ELECTRIC COMPANY
Intelligent Use of Lighting

See the latest developments in lamps and lighting, and G. E.'s now famous "Science of Seeing" in the General Electric Company's exhibit, Booth 118. See how readily an intelligent use of lighting can relieve us human seeing machines of eye strain and of the drain we impose on our energy when we struggle to perform severe visual tasks under improper seeing conditions. Get on more intimate terms with the Indoor Sun, ultra-violet from G. E. Mazda sunlight lamps, and help yourself to vitamin D, the sunshine vitamin.

GENERAL ELECTRIC X-RAY CORPORATION
Shock Proof X-Ray Units

The Model "F" Portable Shock Proof X-Ray Unit will be one of several new designs to be shown by the General Electric X-Ray Corporation, and radiographs showing the quality of work that it is possible to do with this small, compact unit will prove a real surprise. The G. E. Inductotherm, the most simplified and efficient method ever developed for creating heat within the tissue and for producing therapeutic fever, will also be featured. Apparatus for electrocardiography, electrosurgery, and electrocoagulation; ultra-violet quartz lamps, infra-red lamps, etc., will offer many practical suggestions to physicians for valuable additions to their office equipment. Booths 13, 14, 15 and 16.

GENERAL MILLS, INC.
All About Bread

Bread, its nutritional properties and its many and varied uses in the diet, will be the feature of the General Mills display in Booth 21. A "moving wheel" chart, graphically illustrating bread and baked wheat foods as the hub of the balance wheel of the diet, will show bread in combination with various other foods. It will explain how these combinations of food provide the nutritive elements such as proteins, minerals, vitamins and carbohydrates that are necessary in a well balanced diet. A book containing the latest correct information on baked wheat foods will be given to physicians visiting the booth.

HANOVIA CHEMICAL & MANUFACTURING CO.
For Milk Irradiation

A feature of the Hanovia exhibit, Booth 127, will be the Hanovia National Irradiator for vitamin D activation of milk, embodying an automatic ultraviolet intensity control and recorder. Of particular interest also will be the new quartz-mercury Super Alpine Sun Lamp for general body irradiation, the quartz-mercury Super Self-contained Kromayer Lamp for local application, and the Physicians' and Specialists' Models Solux Radiant Heat Lamps for the application of infra-red rays. Special hospital model lamps will also be on display. Trained representatives will be in attendance at this interesting exhibit.

CHR. HANSEN'S LABORATORY, INC.
Junket Powder and Tablets

The Junket Folks will be on hand to welcome you to Booth 47, where a dietitian will show how easily milk may be made into delicious and attractive deserts, milk drinks, and ice cream. Recent research shows that milk with Junket digests faster than milk alone, and this explains why many people who cannot drink milk can eat Junket. Junket Tablets, not sweetened or flavored, are useful for non-sugar and special diets. Visit the Junket booth for samples and further information.

HEALTH PRODUCTS CORPORATION
Cod Liver Oil Concentrate Tablets

In Booth 116 the makers of White's Cod Liver Oil Concentrate Tablets will show the manufacturing processes from the fish to the palatable little tablets. They will explain the year-round benefits of these tablets, which are as effective and easy to take in mid-summer as in winter and are always constant in vitamin content and accurate in dosage.

HAWAIIAN PINEAPPLE COMPANY
Pineapple Juice to Be Served

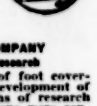
A product that will appeal to all who are interested in pure fruit juices as an important part of the daily diet, is Dole Pineapple Juice which the Hawaiian Pineapple Company will exhibit in Booth 134. It has many known nutritional properties, and entails no muss or fuss in serving. Its value in the diet of children and as a source of Vitamins A, B and G, of mineral salts, food acids, and natural sugars, will be shown. Call at this exhibit for a drink of natural golden juice of fresh, ripe pineapples. You will find it refreshing and unusual.

H. J. HEINZ COMPANY
New Facts About Baby Feeding

In addition to displaying an interesting line of products, H. J. Heinz Company will have a member of its research department at the 57 Varieties exhibit. He will be prepared to present new facts about baby feeding from a scientific viewpoint. On display will be the Heinz line of baby foods, including tomato juice and strained beets, prunes, tomatoes, spinach, carrots, peas, green beans, and mixed vegetables. Heinz Rice Flakes and Breakfast Wheat will be shown, and also Heinz Olive Oil from the company's plant in Seville, Spain. Booth 72.

HOFFMAN-La ROCHE, INC.
Digalen Manikins to Appear

In an attractive setting in Booth 83, the manikins that have been recently appearing in THE JOURNAL A. M. A. ads of Hoffman-La Roche will dramatize the widely accepted "Roche" digitalis remedy, Digalen. In addition there will be other Roche medicinals on display for the interested physician, and members of the Roche staff will be in attendance.



IDEAL BABY SHOE COMPANY
Results of Baby Shoe Research

To determine proper types of foot coverings for each stage in the development of the normal baby foot, months of research directed by orthopedic surgeons were conducted by the department of medical cooperation of Mrs. Day's Ideal Baby Shoe Company. The results of this and other baby shoe research will be explained by representatives, and may be seen in a reference portfolio in Booth 157.

JOHN F. JELKE COMPANY
Good Luck Margarine

In Booth 93 the Jelke attendant will appreciate the opportunity of discussing the food value of Good Luck Margarine. Every Jelke Good Luck product has the seal of approval of the Committee on Foods. Literature in connection with the vitamin content and nutritional values of Good Luck Margarine will be freely distributed.

MEAD JOHNSON & COMPANY
Products for Infant Feeding

One of the features of the Mead Johnson & Company exhibits, Booths 19, 119 and 120 (near the registration desks), will be a display of eight of the original Pothast paintings that have been reproduced from time to time in THE JOURNAL. These paintings are the work of Bernhard Pothast, a famous Dutch painter of child life, who is considered by authorities to rank in the same class with De Hoog, Meyheys, Israels,

List of Exhibitors—Continued

Firm Name	Space No.
Collins, Inc., Warren E., Boston	5
Coop. Med. Adv. Bur.	opp. 172
Corn Products Refining Co., New York	166-167
Davies, Rose & Co., Ltd., Boston	46
Davis & Geck, Inc., Brooklyn	131
Davis Co., F. A., Philadelphia	73
Davis Co., R. B., Hoboken, N. J.	70
DePuy Mfg. Co., Warsaw, Ind.	58
Detroit Cover Co., Detroit	146
DeVilbiss Co., Toledo	43
Do/More Chair Co., Elkhart, Ind.	165
Dry Milk Co., New York	133
Duke Labs., Inc., Long Island City	7
DuPont Film Mfg. Corp., New York	206
Earnshaw Knitting Co., Newton, Mass.	18
Eastman Kodak Co., Rochester, N. Y.	198-199
Eisele & Co., Nashville	160
Electro Surg. Instr. Co., Rochester, N. Y.	194
Electro Ther. Prods. Corp., Los Angeles	140-141
Emerson, J. H., Cambridge, Mass.	149
Enochs Mfg. Co., Indianapolis	111
Fischer & Co., H. G., Chicago	55
Foregger & Co., New York	177
Form Pub. Co., New York	158
Fougera & Co., E., New York	109
Gebauer Chem. Co., Cleveland	147
General Elec. Co., Cleveland	118
General Elec. X-Ray Corp., Chicago	13-14-15-16

etc. There will be a display of all Mead products for infant feeding including Dextri-Maltose, Pablum, Halibut Liver Oil, Mead's Brewers Yeast and Mead's Powdered Milk Products.

JONES SURGICAL SUPPLY COMPANY
McIntosh Physical Therapy Apparatus

As a feature of its exhibit, the Jones Surgical Company will have a complete showing of McIntosh Physical Therapy Equipment and Accessories. All physicians are invited to stop at Booth 148 to see this apparatus and to inspect a full display of surgical instruments and supplies for physicians and hospitals.

KNOX GELATINE COMPANY
To Show Special Dietetic Uses

Visit Booths 90 and 91 and learn the growing importance of Knox Sparkling Gelatine for various dietetic purposes. Attractive dishes suitable for different diets will be on display and booklets on feeding the sick, diabetic diets, reducing diets, etc., will be available. Testing samples of Knox Gelatine salads and candies will also be given free. Competent representatives will be in attendance to supply detailed information.

LAKESIDE LABORATORIES, INC.
Ampoule Preparations

Their Council Accepted Ampoule preparations, particularly their ampoules of Dextrose (d Glucose) 50%, will be exhibited by the Lakeside Laboratories, Inc., in Booth 180. Members of the research staff will be present to demonstrate the chemical, bacteriological, and physiological methods used to insure the purity, sterility, and safety of Lakeside products.

LARSEN COMPANY
Strained Vegetables

In Booth 95 the Larsen Company of Green Bay, Wis., will exhibit its complete assortment of strained vegetables consisting of nine varieties, strained, unseasoned, ready for use — peas, spinach, carrots, beets, green beans, prunes, tomatoes, vegetables with cereal and beef broth, and celery (an exclusive item with Larsen). Particularly interesting is the fact that these vegetables are packed in protective enamel-lined containers with special vacuum seal, yet retail at ten cents.

LEA & FEBIGER
To Show Important New Works

Among the important new works to be exhibited by Lea & Febiger in Booth 60, are Atkinson's "External Diseases of the Eye," Feinberg on "Allergy in General Practice," Grafe on "Metabolic Diseases and Their Treatment," Weil's "Neuropathology," and Bridges' "Dietetics for the Clinician." New editions of important works will include the sixth edition of Kanavel's "Infections of the Hand," the fourth edition of Ormsby's "Diseases of the Skin," the second edition of Nicholson's "Laboratory Medicine," the third edition of Fishberg's "Hypertension and Nephritis," the fifth edition of Joslin's "Diabetic Manual," the second edition of Massie's "Surgical Anatomy," and the tenth edition of Park and Williams' "Pathogenic Micro-organisms."

LEDERLE LABORATORIES, INC.
Biological and Pharmaceutical Products

Among their more important biological and pharmaceutical products shown by the Lederle Laboratories in Booth 53, will be Pollen Antigens, which for 20 years have proved successful in controlling hay fever attacks; Poison Ivy Extract in almond oil for Rhus Dermatitis; Antipneumococcic Serum for pneumonia; the single dose Toxoid for diphtheria prevention; Tetanus-Gas Gangrene Antitoxin for prophylaxis; Staphylococcic Toxoid; Solution Liver Extract Parenteral; Solution Liver Extract Oral; Ferric Ammonium Citrate in capsules; Cod Liver Oil Concentrate Tablets; and standardized Whole Leaf Digitalis Tablets. Attendants will gladly answer in detail the questions of visitors.

LEPEL HIGH FREQUENCY LABORATORIES, INC.
New Short Wave Machine

In Booths 137 and 138 the Lepel High Frequency Laboratories will exhibit their new short wave machine for local heat treatments without application of metal electrodes, and a complete line of high frequency machines for electro medical and electro surgical use. A model will be shown which enables giving diathermy treatments with almost complete elimination of radio intereference. They will also show a new ultra-violet quartz lamp.

ELI LILLY AND COMPANY
To Show Graphs and Transparencies

Graphs and transparencies displayed in art glass panels wil! be the dominant feature of the Lilly exhibit in Booths 74, 75 and 76. Among the products illustrated will be Iletin (Insulin, Lilly), Amytal, Sodium Amytal, Merthiolate, Extralin, Ephedrine preparations, and Biologicals. The Iletin (Insulin, Lilly) panel will show the relation between the metabolic load and metabolic capacity in normal and diabetic individuals. The Ephedrine panel will illustrate certain physiological effects of this alkaloid. Physicians from the medical department of Eli Lilly and Company laboratories will be at the exhibit.

LINDE AIR PRODUCTS COMPANY
Economy in Oxygen Therapy

The Linde Air Products will feature a model oxygen tent and will give practical instruction and demonstration in the technic of testing oxygen and carbon dioxide concentrations. On display will be cylinders of Linde Oxygen U.S.P. for use with any oxygen administrating equipment, the new Linde Oxygen Flow Indicator, and other oxygen apparatus. Reprints of current literature on oxygen therapy will be available to those interested in the subject. Booths 143 and 144.

J. B. LIPPINCOTT COMPANY
"Post-Graduate Instruction at Home"

Among the books to be shown by The J. B. Lippincott Company in Booth 135, will be Peham and Amreich's "Operative Gynecology," 2 volumes extensively illustrated to show each operation step by step; Kirschner's "Operative Surgery" in 2 volumes; a new edition of Lippincott's "Quick Reference Book"; Lewellys F. Barker's new "Treatment of the Commoner Diseases"; and the new idea in personal post-graduate instruction at home supplied from the Pittsburgh Diagnostic Clinic as a supplement to the "International Clinics"; and in the nursing field an entirely new work by Solomon on "Pharmacology Materia Medica and Therapeutics for Nurses" and new editions of the standard nursing texts.

MACMILLAN COMPANY
To Show Advance Proofs

On display at the Macmillan Booth, 81, will be Crile's "Diseases Peculiar to Civilized Man" and Pemberton-Osgood's "Medical and Orthopaedic Management of Chronic Arthritis," which have just been published. There will be advance lithograph plates from Wilmer's "Atlas of the Eye" which will be published some time this summer. Advance material on Meigs' "Tumors of the Female Pelvic Organs," Miller's "Tuberculosis of the Lymphatic System," Wilensky's "Osteomyelitis" and other important books in preparation will also be available. Ask the representative at the booth to show you some of the latest Macmillan publications in varied fields.

MALLINCKRODT CHEMICAL WORKS
To Show the "Famous 84"

A survey has shown that nearly all prescriptions are filled from approximately 84 chemicals. Mallinckrodt, in Booth 84, will display these chemicals, known to retail druggists throughout the country as "the famous 84." In addition they will show Barium Sulphate for x-ray of the gastro-intestinal tract; Iodeikon and Iso-Iodeikon, radiopaque dyes permitting x-ray of the gall bladder; the arsenicals; and ether for anesthesia. Films will show the first public demonstration of surgical ether anesthesia, and its manufacture. Interesting literature on these items will be available to visitors.

MALTINE COMPANY
Results of Vitamin A Study

Charts and slides are to be exhibited by The Maltine Company in Booth 132, showing the results of a study just completed at one of the large Eastern universities. This demonstrates how the value of vitamin A of cod liver oil may be enhanced when it is emulsified with Maltine. The various steps in the manufacture of Maltine with Cod Liver Oil, together with photomicrographs of the final products, are also to be illustrated and described.

MARCELLE LABORATORIES
Non-Allergic Cosmetics

If you will register at Booth 207, the Marcelle Laboratories will mail you any Marcelle Cosmetic item you select. Experienced attendants will be on hand to give you such information as you may desire concerning these non-allergic cosmetics.

MEDICAL BUREAU
For Medical Personnel

In Booth 121 Miss Burneice Larson will offer the facilities of The Medical Bureau, an organization acting as counselor in problems of medical personnel to hospitals, administrators, clinic managers and executives in the medical field. The records of physicians who have specialized in various branches of medicine, men and women interested in assistantships, accredited graduate nurses, laboratory technicians and dietitians are available to those interested in the completion or reorganization of their staffs.

List of Exhibitors—Continued

Firm Name	Space No.
General Foods, New York	44
General Mills, Inc., Minneapolis	21
Gerber Prods. Co., Fremont, Mich.	106
Gradwohl Labs., St. Louis	158
Hamilton Mfg., Two Rivers, Wis.	101-102 & 107
Hankins Rubber Co., Massillon, Ohio	48
Hanovia Chem. & Mfg. Co., Newark	127
Hansen's Lab., Chr., Little Falls, N. Y.	47
Hawaiian Pineapple Co., San Francisco	134
Health Prods. Corp., Newark	116
Heidbrink Co., Minneapolis	54
Heinz Co., H. J., Pittsburgh	72
Hoffmann-LaRoche, Inc., Nutley, N. J.	83
Hygeia	176
Hynson, Westcott & Dunning, Baltimore	89
Ideal Baby Shoe Co., Danvers, Mass.	157
Jelke Co., John F., Chicago	93
Johnson & Co., Mead, Evansville	19, 119-120
Johnson & Johnson, New Brunswick, N. J.	104
Jones Surg. Supply Co., Cleveland	148
Kelley-Koett Mfg., Covington, Ky.	212
Kellogg Co., Battle Creek, Mich.	77
Knox Gelatine Co., Johnstown, N. Y.	90-91
Lakeside Labs., Inc., Milwaukee	180
Larsen Co., The, Green Bay, Wis.	95
Lea & Febiger, Philadelphia	60
Lederle Labs., Inc., New York	53
Lepel High Freq. Labs., New York	137-138
Liebel-Flarsheim Co., Cincinnati	20-20B
Lilly and Co., Eli, Indianapolis	74-75-76

MEDICAL CASE HISTORY BUREAU

To Show Inexpensive Method

If you find record keeping an onerous task; if you are interested in a system that shows at a glance the case you want, how many calls you made and when, the patient's history, the developments, diagnosis and treatments, and the financial status of each case, it will pay you to spend some time in Booth 34 for the purpose of investigating the Medical Case History Bureau. All the charts will be shown there for all branches of medicine, just as they are actually kept in their cabinets.

MEDICAL PROTECTIVE COMPANY

"The Doctor and the Law"

In Booth 36 you may obtain a copy of the current number of the Medical Protective Company's publication, "The Doctor and the Law." Under that title the law department of the Company is now presenting periodical discussions of the fundamental principles of law in their practical every day application to the practice of medicine.

MELLIN'S FOOD COMPANY

Basic Principles of Mellin's Food

Since the adjustment of the diet for babies deprived of human milk must always be of interest to physicians, the Mellin's Food Company will set before physicians the basic principles of Mellin's Food, with the sincere belief that the evidence accumulated from long experience fully justifies the recognition of the value of Mellin's Food as a modifier of milk in infant feeding. Physicians are cordially invited to visit Booth 62.

WM. S. MERRELL COMPANY

Dioramas to Present Contrasts

In Booth 42 the Wm. S. Merrell Company will feature two dioramas or miniature reproductions. One will depict the original apothecary shop of Wm. S. Merrell as it appeared in 1828, and the other an interior view of the present day Merrell Biological Research Laboratory at Reading, Ohio, making a striking comparison of the older methods of production with the up-to-date equipment of a modern biological plant. The Merrell Company will show Fibrogen and Natural Sodium Salicylate, as well as the standard U.S.P. and N.F. pharmaceuticals.

MIDDLEWEST INSTRUMENT COMPANY

Waterless Metabolism Apparatus

The Middlewest Instrument Company will feature a waterless type of metabolism apparatus with calculations eliminated by use of a very simple slide rule. Demonstrations of the technic and accuracy of the machine will be made on actual cases, and tests made without charge on anyone wishing to know his own basal metabolic rate. You are cordially invited to visit Booth 52.

C. V. MOSBY COMPANY

To Show Complete Line

A cordial invitation is extended to all physicians to visit Booth 92 where the C. V. Mosby Company will display its complete line of medical publications. Among the newer books to be shown will be Hertzler's "Surgery of a General Practice," Key and Conwell's "Management of Fractures, Dislocations and Sprains," Pottenger's "Tuberculosis in the Child and Adult," and Vehrs' "Spinal Anesthesia."

V. MUELLER & COMPANY

Hospital Equipment

A bone surgery engine of a new design, to be shown by V. Mueller & Company in Booths 124 and 125, has several features that you will be interested in seeing demonstrated. This firm will also display its new Herb-Mueller Ether Vapor and Vacuum Apparatus, which has all the latest improvements and is up to the Mueller high standard of quality. Many new patterns of surgical instruments, as well as hospital equipment, will be exhibited.

NATIONAL CARBON COMPANY, INC.

To Show Milk Irradiation

The exhibit of National Carbon Company, Inc., Booths 143 and 144, will feature the application of the Eveready Carbon Arc Irradiation Unit to the irradiation of milk. This method of increasing the vitamin D content of milk has been adopted by several of the large dairy companies in various cities and is a subject of considerable interest to all physicians. Actual irradiating equipment in full operation will be demonstrated. Competent men will be in attendance at the exhibit to explain the details of the process and the value of the resulting product.

NESTLE'S MILK PRODUCTS, INC.

New Modifier of Cow's Milk

Hylac, the new modifier of cow's milk for infants, will be featured in the exhibit of Nestlé's Milk Products, Inc., in Booth 61. Physicians interested in the adaptation of fresh cow's milk for infant feeding will have an opportunity to familiarize themselves with this new modifier, which makes it possible to naturalize the artificial feeding in proportions of fat, carbohydrate and protein. Representatives in charge of this exhibit will gladly supply detailed information on Hylac to all physicians who visit the Nestlé booth.

OHIO CHEMICAL AND MANUFACTURING COMPANY

Complete Line of Anesthetic Gases

In Booth 130 The Ohio Chemical and Manufacturing Company will exhibit a complete line of Ohio anesthetic gases, showing a new and better cylinder seal and a new rubber grip for large cylinders. They will also show oxygen therapy apparatus which is now available for rent or for sale through 17 branches located in principal cities. Another interesting item will be Deuterium Oxide (Heavy Water), the new element which has created so much interest in the field of scientific research. Ask to see Ohio Ethyl Chloride and the new Carrying Kit.

PAGE MILK COMPANY

Vitamin D Evaporated Milk

You are invited to stop at Booth 179 to get full information concerning Page Vitamin D Evaporated Milk. This milk is not irradiated, the vitamin D being obtained by the addition of a tasteless cod liver oil concentrate. Each tall 14½-ounce can contains 150 Steenbock units of vitamin D. Because of its unusually high vitamin D potency and because the use of this same concentrate doubles the normal vitamin A content, Page Vitamin D Evaporated Milk is of particular interest for infant feeding. It may also be used in puddings, custards, etc., as cooking does not affect the vitamin potency.

LYDIA O'LEARY

A Way to Conceal Birthmarks

Practically every physician encounters persons who are handicapped by the presence of unsightly birthmarks on the face, neck or arms. How these blemishes can be so expertly concealed as to practically defy detection will be shown by Lydia O'Leary in her demonstration of "Cover Mark," a harmless preparation which needs to be applied but once a day. The preparation resists water when swimming, and will not crack or rub off until removed. A visit to this demonstration may help you remove an overwhelming handicap from some of your patients or acquaintances. Booth 209.

OXFORD UNIVERSITY PRESS

Invites You to Browse

The Oxford University Press feels that a few minutes of your time browsing in its exhibit in Booth 49 will be well spent. It will contain many books of interest to the general practitioner and the specialist, such as the new edition of "Applied Physiology" by Wright, "A Text-Book of Psychiatry" by Henderson and Gillespie, Mayou's "Diseases of the Eye" revised by Ridley, and others of equal importance.

PANDORA BAG COMPANY

To Show Bag in Construction

The new Pandora Bag in all stages of construction, just as it is made at the factory, will be shown by the Pandora Bag Company in Booth 169. Physicians can learn how the bag is made, examine samples of the leather, see all the sizes, and determine whether Pandora fits their needs. The new ampoule case, bottle arrangements of every variety, the new hypodermic case which makes blunt needles an impossibility, and the new sterilizer which makes your Pandora into an R. B. bag at will—all fitted to Pandora—will be shown.

PARKE, DAVIS & COMPANY

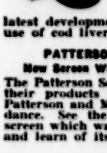
Demonstrations by Research Workers

An exhibit of unusual scientific interest is being prepared by Parke, Davis & Company. Apparatus used in the standardization of pituitary hormones will be included in the exhibit and actual demonstrations will be made to visiting physicians by research workers from the Parke-Davis Laboratories. Among other things to be shown is the new barbituric hypnotic, Ortal Sodium, which has aroused widespread medical interest because of its high efficiency and low toxicity. Expert technical men will be in charge to welcome you to Booths 30, 31 and 32.

E. L. PATCH COMPANY

Flavored Cod Liver Oil

Throughout the past few years when the vitamin picture has been constantly changing, Patch's Flavored Cod Liver Oil has maintained its high position as a natural source of vitamins A and D. This year, in Booth 57, there will be some new and interesting features in connection with this well known product. The Patch Laboratory representatives will be on hand ready to answer questions and give information regarding the latest developments in the production and use of cod liver oil.



PATTERSON SCREEN COMPANY

New Screen Will Interest Roentgenologists

The Patterson Screen Company will exhibit their products in Booth 184, where Mr. Patterson and Mr. Reuter will be in attendance. See the new type B fluoroscope screen which was introduced late last year, and learn of its advantages.

List of Exhibitors—Continued

Firm Name	Space No.
Linde Air Prods. Co., New York	143-144
Lippincott Co., J. B., Philadelphia	135
McCaskey Register Co., Alliance, Ohio	181-182
McKesson-Hall-Van Gorder, Cleveland	208
McKesson & Robbins, Bridgeport, Conn.	145
McKesson Appliance Co., Toledo	29
M & R Dietetic Labs., Columbus, Ohio	88
MacGregor Instr. Co., Needham, Mass.	170
Machlett Labs., Springdale, Conn.	210
Macmillan Co., The, New York	81
Mallinckrodt Chem. Works, St. Louis	84
Malthe Chem. Co., Newark	151-152
Medical Arts Co., New York	132
Marcelle Labs., Chicago	207
Medical Bureau, The, Chicago	121
Medical Case History Bureau, New York	34
Medical Protective Co., Wheaton, Ill.	36
Mellin's Food Co., Boston	62
Merck & Co., Rahway, N. J.	9-10-11
Merrell Co., Wm. S., Cincinnati	42
Metz Labs., H. A., New York	99-100
Middlewest Instr. Co., Chicago	52
Mosby Co., C. V., St. Louis	92
Mueller & Co., V., Chicago	124-125
National Carbon Co., Cleveland	143-144
Nestle's Milk Prods., Inc., New York	61
Ohio Chem. & Mfg. Co., Cleveland	130
O'Leary, Lydia, New York	209
Oxford Univ. Press, New York	49
Page Milk Co., Merrill, Wis.	179

PETROLAGAR LABORATORIES, INC.

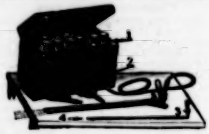
How Product with Cascara

Petrolagar with Cascara, a new product for the treatment of constipation which combines the mechanical softening action of Petrolagar-Plain with the stimulating effect of Fluidextract Cascara Sagrada, will be exhibited by Petrolagar Laboratories, Inc., in Booths 2, 3 and 4. There will be a continuous showing of Petrolagar Scientific Medical Motion Pictures, and an exhibition of photographs of notable physicians who have offered major contributions to medicine.

GEORGE P. PILLING & SON COMPANY

Instruments for Thoracoplasty

Bronchoscopic and esophagoscopic instruments as developed by the staff of the Chevalier Jackson Clinics will as usual be featured in the exhibit of George P. Pilling & Son Co., Booth 108. Special attention will also be directed to instruments used



in the rapidly developing field of thoracoplasty, and instruments of Sauerbruch, Frey, Schneider, Lebsche, Alexander, Bethune, Hudson, Honan, and O'Brien will be shown. Brain surgery instruments and recent developments in rectal and oral surgery will also be displayed. Pilling and Company make many of these instruments in their own factory, and invite you to inspect them.

W. F. PRIOR COMPANY

Loose-Leaf Sets

Its latest 3-volume loose-leaf sets, Davis' "Gynecology and Obstetrics" and "Principles and Practice of Physical Therapy" by Mock, Pemberton and Coulter, will be featured by the Prior Company. In the latter book this most misunderstood subject is assessed by men high in medical ranks. Its essential dovetailing with proper medical and surgical treatment, with restoration of function as the goal, is covered in an unbiased manner. See also Dean Lewis' "Practice of Surgery" and Tice's "Practice of Medicine" in loose-leaf form. Booth 56.

RADIUM CHEMICAL COMPANY, INC. and RADON COMPANY, INC.

To Have Joint Exhibit

New types of containers and accessories for the application of radium and radon in malignant and non-malignant conditions, will be displayed by the Radium Chemical Company, Inc., and the Radon Company, Inc., in Booth 187. Attention is called particularly to the display of the new removable platinum radium cells, with complementary gold sheath needles (for interstitial irradiation) and platinum capsules (for intra-cavity application). With a small quantity of radium in these removable cells, the same type of effective work can be done as with a larger amount of radium made up into containers of more permanent form.

RALSTON PURINA COMPANY

Cereals and Ry-Krisp

Ralston Wheat Cereal, Baby Ralston, and Ry-Krisp, the Whole Rye Wafer, will be exhibited by the Ralston Purina Company in Booth 35. Ralston Wheat Cereal provides the elements of whole wheat plus the appetite—essential properties of the extra vitamin B, added in the form of wheat germ. Baby Ralston now furnishes a rich source of vitamin B, iron and calcium for the small infant who is just starting to eat cereal. Ry-Krisp, which remains the country's most popular rye cracker, is used in general as well as special diets. The exhibit will afford an excellent chance to learn about these three important food products.

S.M.A. CORPORATION

Antirachitic Breast Milk Adaptation

S.M.A., the well known antirachitic breast milk adaptation for infants deprived of breast milk, will be featured in the display of the S.M.A. Corporation. S.M.A., when diluted according to directions, is essentially similar to human milk in percentages of protein, fat, carbohydrate and ash, in chemical constants of the fat and in physical properties. Powdered Hypo-Allergic Milk for the milk-sensitive will be another feature—ask for the "Milk Allergy" booklet. Alerdex, the protein-free maltose and dextrins, product which is gaining favor for routine use as a prophylactic against cereal eczemas, will also be displayed in Booth 82.

SANBORN COMPANY

Metabolism and Electrocardiograf Testing

The 1934 Sanborn Motor-Grade Metabolism Tester, introducing the electrically driven Kymograf clock, will be on display in Booth 64. You are invited to inspect this tester, and also the 1934 Sanborn Electric-Porbeardiograf, which operates directly from lamp socket or wall plug. This makes it a conveniently portable outfit for testing at patients' homes, as well as for office use.

SCANLON-MORRIS COMPANY

To Demonstrate New Operating Table

For the first time, Scanlon-Morris Company will demonstrate its latest general operating table, which incorporates remarkable conveniences for general and special surgery. New features in dressing, water, instrument and utensil sterilizers that greatly simplify control of the sterilizing process will be available for investigation. Specialties in suture materials will be demonstrated, and a novel glove-drying and powdering machine will be exhibited. An experienced representative will be in attendance at Booth 12 to discuss equipment problems of the surgeon and the hospital executive.

W. B. SAUNDERS COMPANY

Books That Describe New Treatments

An examination of the books to be shown by W. B. Saunders Company in Booth 63 will reveal the vast number of new treatments, both medical and surgical, that have come into practice even during the past year. Particularly important are Curtis' 3-volume "Obstetrics and Gynecology," Callander's "Surgical Anatomy," Bickham's "Operative Surgery," the new "Mayo Clinic Volume," Beckman's "Treatment," De Lee's "Obstetrics," Cecil's "Medicine," "Medical Clinics of North America" and "Surgical Clinics of North America," Stokes' "Syphilology," Pepper and Farley's "Hematologic Diagnosis," Buck's "Physical Diagnosis," Gleason on the "Nose, Throat and Ear," Jackson's "Bronchoscopy, Esophagoscopy and Gastroscopy," Norris and Landis' "Chest Diseases," and Griffith and Mitchell's "Pediatrics."

SANDOZ CHEMICAL WORKS, INC.

Outstanding Pharmaceutical Specialties

Sandoz Chemical Works, Inc., will feature Calglucon (Calcium Gluconate-Sandoz) in stable ampule solution for safe, non-irritant intravenous and intramuscular calcium therapy; also in tablets and granules for palatable oral use. In addition they will present Gynergen, the original product containing the specific ergot alkaloid, ergotamine, in pure and stable form; and Scillaren, the glucosidal principles of squill, a new and reliable cardiodiuretic. Competent representatives will be in attendance at Booth 71.

SCIENTIFIC SUGARS COMPANY

New Carbohydrate Syrup

Cartose, the new carbohydrate syrup for supplementing milk for infant feeding, will be displayed by the Scientific Sugars Co. in Booth 159. The constant uniformity, the remarkable bacteriological purity, and the economy of this maltose-dextrin-dextrose-sucrose product appeal to the exacting pediatrician as well as the general practitioner.

SHARPE & DOHME, INC.

Will Make Exhibit Different

Sharpe & Dohme will occupy Booth 112 this year, and their exhibit is expected to be entirely different from any which they have ever had. No particular pharmaceutical or biological product will be displayed, but their exhibit will be attractive and interesting and will be well worth visiting.

SHARP & SMITH

Large Display of Instruments

In addition to a complete line of surgical instruments and supplies, as regularly exhibited by Sharp & Smith, there will be on display in Booth 25 the Willamac Electrode with various tips, suitable for every kind of work in diathermy.

SNUGGLE RUG COMPANY

Infants' Crib Covers

In addition to the Snuggle Bunny and Snuggle Ducky Crib Covers for infants which the Snuggle Rug Company has been manufacturing for several years, some new Crib Covers will be demonstrated in Booth 103. Each of these keeps the baby completely and comfortably covered at all times, and at the same time allows him complete freedom of movement under the cover. You are invited to inspect this line of Crib Covers which answers most of the infant sleeping problems, including all pocketbooks, climates and seasons.

SPINACH PRODUCTS COMPANY

Spintrate in New Form

The demand for an easier method of administration with adults and older children, has resulted in the development by the manufacturers of Spintrate during the past year of candy coated Spintrate tablets. Doctors interested in organically bound mineral supplements to special diets are invited to become acquainted with this new item at Booth 87. The powdered Spintrate as used in infants' formulae will also be demonstrated.

SONOTONE CORPORATION

To Demonstrate Hearing Aids

Latest developments in bone conduction hearing aids for individual and group use will be demonstrated by the Sonotone Cor-

List of Exhibitors—Continued

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Prior Co., W. F., Hagerstown, Md.	56
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Sonotone Corp., New York	211
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poration, Booth 211. This is an opportunity to inspect and test personally devices which have attracted wide attention in recent months. Vacuum tube equipment for individual or group use, including the set for teaching purposes with audiometer attachment, will also be on exhibition. Interesting literature containing complete information on Sonotone products will be supplied for your files.

SPENCER CORSET COMPANY

To Demonstrate Support

The Spencer exhibit in Booth 115 will interest both physicians and their wives.

Trained representatives will demonstrate the Spencer theory of individual designing service, which transfers the pull of the abdominal support to the pelvic girdle and not to the spine at or above the lumbar region. They will explain the advantages of having supports individually designed to meet the particular needs of each patient, and will display and demonstrate supports for postoperative wear, maternity, postpartum, sacro-iliac sprain, movable kidney, enteroptosis, hernia, and breast uplift.

E. R. SQUIBB & SONS

New Liver Preparation

An extensive exhibit occupying Booths 79 and 80 will be utilized by E. R. Squibb & Sons to acquaint visiting physicians with the new developments in their glandular, anesthetic, vitamin, chemo-therapeutic and biological products. One of the newer products to be featured is Autolyzed Liver Concentrate. The display of Pollen Extracts will attract physicians who are interested in hay fever therapy. Competent attendants will be present to answer inquiries and discuss any Squibb products.

STOKELY BROTHERS & COMPANY

Introduce Strained Foods

Growers and canners of vegetables for 36 years, Stokely Brothers & Company are introducing their new Strained Foods for Baby. They will show why every step in the preparation of these foods is laboratory controlled, from the moment the fresh vegetables and fruits go into the shiny, glass lined kettles until they are sealed in special golden enamel lined cans, and how the natural flavor, valuable vitamins and mineral salts of the fresh product are retained to a high degree. Visit Booth 156 and see why these foods are so tempting to baby.

SURGICAL PUBLISHING COMPANY

"Surgery, Gynecology and Obstetrics"

Edited and published by surgeons in the interest of practitioners of surgery, this journal, "Surgery, Gynecology and Obstetrics," will be exhibited by its publishers, The Surgical Publishing Co., in Booth 173. It presents monthly a score or more of original contributions by eminent authorities, and provides a complete and authoritative résumé and index of the current surgical literature of all languages. See also Dr. Franklin H. Martin's autobiography, "The Joy of Living," which will be on display.

SUN-RAYED COMPANY

Kemp's Sun-Rayed "on Draught" Again

Kemp's Sun-Rayed Pure Tomato Juice will again be "on draught" in Booth 51 with the compliments of the manufacturer, the Sun-Rayed Company, Division of Kemp Bros. Packing Company. Attention will be called to the patented manufacturing process by which whole vine-ripened tomatoes are converted into full-bodied, non-separating juice, and to the exacting methods of vitamin retention. New photographs will illustrate the production process, and a new trophy awarded the Kemp Brothers will be displayed.

TAYLOR INSTRUMENT COMPANIES

Sphygmomanometers and Thermometers

Along with Tycos Sphygmomanometers, the Taylor Instrument Companies' exhibit will feature the new Taylor Estee Thermometer.

Taylor

This high grade clinical thermometer will be offered at an extremely low price, singly or in professional sets of six. The set consists of any combination of bulb styles desired, oral, rectal or stubby. Booth 98.

CHARLES C. THOMAS

Will Show New Books

Of special interest in the Charles C. Thomas exhibit, Booth 1, will be: Moore's "Modern Treatment of Syphilis," Grinker's "Neurology," Carlisle's "Practical Talks on Heart Disease," Thoma's "Clinical Pathology of the Jaws," Dandy's "Benign Tumors in the Third Ventricle of the Brain," Glasser's "Science of Radiology," Glasser's Wilhelm Conrad Röntgen," Fischer's "Lyophilic Colloids," Doran's "Surgery" (2nd edition), Hitchcock's "Physical Chemistry," Blech and Lynch's "Medical Tactics and Logistics," Kasner's "Child Psychiatry," Craig's "Amebic Dysentery," and Wiener's "Blood Groups."

TRAINING SCHOOL AT VINELAND

To Show Work in Research Laboratory

The Training School at Vineland, N. J., a private school for mentally deficient children and adults, will display hand work of some of its pupils in Booth 50. Miss Clarrette Schon, field secretary for the institution, will be in charge of the exhibit. She will show moving pictures of the work being done particularly in the research laboratory of the Training School, where the causes of mental deficiency and the means of ameliorating the condition of the mentally deficient are being sought. Literature giving full information concerning the school will be available.

UNITED FRUIT COMPANY

Drink a Ripe Banana!

At the exhibit of the United Fruit Company, Booth 41, you may enjoy a variety of delicious drinks made from fresh ripe bananas before your very eyes. Printed recipe cards showing the methods and ingredients for making these banana drinks, will be distributed. In addition, the latest scientific data on the nutritive and therapeutic value of the banana, based on extensive research, will be supplied.

UNITED PRUNE GROWERS

To Refute Misleading Ideas

The results of two years of extensive research proving the falsity of many ideas concerning prunes, are being published by the United Prune Growers for distribution in Booth 67. The exhibit will be presided over by Ray Randall and L. B. Williams, of the California Dried Fruit Research Institute, and E. M. Mrak of the University of California.

VITAMIN FOOD COMPANY

Animals to Feed on Vegex

The chemist who made the first salt-enzyme autolyzed extract from yeast Vegex found that it tasted liked cooked meat, although meat-free. Vegex was widely used for soups before the vitamin discoveries. During the World War the British government selected it for treating beri-beri and then for the regular rations of the troops. Since then in medical centers with both child and adult diets, Vegex has been a standard for vitamin B_1 and is equally high in vitamin G or B_2. See the 90 or more animals on vitamin feeding tests in the Vegex exhibit in Booth 203.

WINTHROP CHEMICAL COMPANY, INC. AND H. A. METZ LABORATORIES

Pharmaceuticals of Note

All visitors are cordially invited to inspect Booths 99 and 100, where, among the many outstanding products to be displayed, attention will be called to Salyrgan, the diuretic whose value is universally recognized; Phanodorn, the hypnotic which assures natural sleep without a "hangover"; Skiodan, for intravenous and retrograde pyelography; Silver-Salvarsan, of proved efficiency in resistant types of syphilis; and to other well known products. Literature on these preparations as well as on newer introductions will be freely available to all physicians.

WILLIAM WOOD & COMPANY and WILLIAMS & WILKINS COMPANY

Find New Strength in Union

Booth 17 will represent the union of one of the oldest and one of the youngest American publishing houses — William Wood & Co. and the Williams & Wilkins Company—and will provide a convenient opportunity for you to examine their latest medical and scientific books and journals. Included will be many new editions of well known standard works, such as Cabot's "Physical Diagnosis," DeLafield & Prudden's "Pathology," May's "Eye," Bell's "Gynecology," Keith's "Embryology" and others; also such striking new books as Dickinson's "Human Sex Anatomy" and his "The Single Woman."

CARL ZEISS, INC.

Call Attention to Photometers

Their well known microscopes and accessories, as well as other scientific and surgical apparatus, will be shown in Booth 113 by Carl Zeiss, Inc. You are especially invited to see the Pulfrich Photometer for colorimetric and nephelometric examinations, the Wolff-Schindler flexible Gastroscope, the Laparo-Thoracoscope for severing adhesions, and the Birch-Hirschfeld Retinal Photometer for determining vitamin A deficiency.

ZIMMER MANUFACTURING COMPANY

New Fracture Bed to Be Shown

An interesting assortment of the newest items in fracture equipment will be displayed by the Zimmer Manufacturing Company in Booth 97. A model of the fracture bed with overhead frame that has been officially approved by the Fracture Committee of the American College of Surgeons, the new Roger Anderson Reduction Apparatus, the Electric Plaster Cutter, and other items will be shown for the first time.

Additional Descriptions of Exhibits Received Too Late to Include in This Section Will Be Found on Advertising Pages 78, 79, 80, 82, 84

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THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

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Please send in promptly notice of change of address, giving both old and new; always state whether the change is temporary or permanent. Such notice should mention all journals received from this office. Important information regarding contributions will be found on second advertising page following reading matter.

SATURDAY, MAY 12, 1934

THE CLEVELAND SESSION

As will be apparent to every Fellow of the American Medical Association who considers carefully the material available in this issue concerning the Cleveland session, the scientific pabulum there offered will be nourishing. The scientific exhibits surpass in number and equal in quality those of previous sessions. In the clinical programs, the Council on Scientific Assembly and the officers of the sections have provided a series of general scientific meetings in which leaders of note will discuss topics of immediate interest to the entire assemblage. The scientific sections of the Association, which cover all the leading fields of medical practice, will be supplemented by special sessions of the Section on Miscellaneous Topics devoted to medicolegal problems and to questions on nutrition. Coordinating the scientific presentations, the sections will be fully represented in the Scientific Exhibit, as will also the general scientific meetings.

The policies of medical science and of the practice of medicine in relationship to the public and the state will have thorough consideration at the Cleveland session. Not only will these come before the House of Delegates in the routine manner—as was made apparent by the report of the Board of Trustees and of the special councils, published in THE JOURNAL last week—but also a special session of the House of Delegates in executive session is planned for special consideration of problems of medical economics. A thorough consideration in this democratic assemblage of the elected representatives of the medical profession in all the states and territories should yield policies by which the medical profession may be guided in these changing times.

The medical profession of Cleveland is doing its utmost to plan a program of entertainment, an opening meeting, and a number of receptions and banquets which are in accord with the repute of that city for hospitality. The number of reservations made at the leading hotels in Cleveland indicate a record breaking attendance. THE JOURNAL would therefore advise those who contemplate attending the session to make their reservations at the earliest possible moment in order to be assured of comfortable quarters.

The city of Cleveland, situated on one of our great inland lakes, is in the month of June one of the most comfortable cities of America. It is easily accessible to every type of transportation. The session comes at a time that seems to mark the beginning of the end of the economic depression. The physician who has at heart not only his scientific advancement but also the needs of his profession will do his utmost to participate in the Cleveland session.

THE PROBLEM OF HUMAN STERILIZATION

Alarm over the apparent increase in crime and the financial burden of institutionalization of social enemies and incompetents has renewed interest in ways and means of solving this problem. Human sterilization, at present receiving its test in a mass effort in Germany,[1] is perhaps the principal method being studied at the present time. In this question the medical profession is directly interested as the instrument for carrying out any such program, and indirectly as an important division of society in deciding if, how and why any large scale attempts at human sterilization should be attempted.

As to the importance of the burden of crime, insanity and feeblemindedness to society there can be but one answer. In the United States [2] the number of patients with mental disease resident in state hospitals alone has shown a marked increase. In 1880 there were 31,973, in 1910 there were 159,096, and in 1929 there were 272,527 patients with mental disease confined in state hospitals. Further analysis of these statistics is necessary. The ratio of total patients with mental disease per hundred thousand of the general population increased from 63.7 in 1880 to 225.9 in 1929. Again analysis is insufficient; is the increase real or due to a higher percentage of institutional confinement in recent years? What proportion of these patients are suffering with "inherited" mental disease? Viewing the problem from a slightly different angle brings out further matter for consideration.[3] "Careful studies indicate there are six millions in the United States who have been, are now, or at some future time will be legally committed as insane to state institutions. . . . There are six million additional cases who are not mentally diseased, but who are so deficient in intellect with an endowment in this respect that is more than 50 per cent below average that they are often described as feebleminded." The financial cost is difficult to analyze in all its direct and indirect ways. Suffice it to state by way of illustration that the per capita cost in 1928 for prisons was $320.89, for hospitals $308.85, and for institutions for

1. Human Sterilization in Germany and the United States, editorial, J. A. M. A. **102**:1501 (May 5) 1934.
2. Landman, J. H.: Human Sterilization, New York, Macmillan Company, 1932, pp. 16-17.
3. Randall, H. E.: The Operation of Sterilization, J. Michigan M. Soc. **33**:74 (Feb.) 1934.

the feebleminded and the epileptic $300.67.[4] The facts and figures of the growing burden of social misfits and incompetents could be multiplied. Certainly there is no doubt of the social and economic problem.

Sterilization of the unfit as a means of gradually reducing the toll exacted from society is not of recent origin. It is based on the essential concept that certain traits which are recognized as unsocial are perpetuated in the race by direct propagation. It is on this concept that the whole problem hinges. When viewed superficially with only cursory examination of the eugenic evidence, few socially minded individuals can resist the rosy outlook of banishing incompetence in a few years by the simple expedient of preventing the conception of such individuals by sterilization of the potential parents. The laws governing human heredity, especially of "mental traits," are unfortunately not known. Too often a mental trait is confounded with a mendelian unit character. Too often are uncritical histories of families such as the Jukes, the Kallikaks and the Edwardses the basis for unsubstantiated far-reaching eugenic conclusions. In feeblemindedness, schizophrenia, circular insanity, epilepsy, Huntington's chorea and hereditary blindness and deafness the proponents of eugenic sterilization find evidence of inheritance which they believe amenable to reduction by this means. Other authorities, however (e. g., Tredgold[5]), believe that mental deficiency is not due to absence in the ancestral germ cells of certain components but to incomplete development resulting from diminished capacity of growth of the seed. Tredgold finds, moreover, that the proportion of defectives who are the offspring of defective parents is exceedingly small. It follows that, if every defective in existence a generation ago had been sterilized, the number of defectives today would not be appreciably diminished. Hence if this principle should be properly applied it would be necessary to sterilize heterozygous individuals who are latent carriers of mental ailments.

From the evidence thus briefly considered it would appear that society is faced with an increasing (so far) load of mental and physical incompetents. Whether sterilization of large numbers of these incompetents would improve the position of society is dependent on one of two factors as yet undetermined. If it becomes possible to gage the laws of human inheritance with mathematical certainty, either human sterilization or "positive eugenics" (increased breeding of desirable stocks) would seem desirable. If, on the other hand, without waiting for more definite information of inherited transmission, mass sterilization of defectives is carried out, with subsequent definite decrease in the number of defectives, its value also would be proved. Such a program could not, however, be subject to critical analytic conclusions short of several generations.

4. Landman. Human Sterilization, p. 39.
5. The Sterilization of Mental Defectives, London Letter, J. A. M. A. **87**: 1404 (Oct. 23) 1926. Sterilization of Defectives (Departmental Committee's Report): Brit. M. J. **1**: 161 (Jan. 27) 1934.

AN INVESTIGATION INTO THE CAUSE OF HYPERTENSION

Since 1733, when the English rector Stephen Hales published the results of his ingenious experiments "to find out the real force of the blood in the arteries," this subject has occupied the attention of medical men. Lifetimes of study have been devoted to elucidation of the intricate problems of cardiovascular physiology and pathology; clinical applications have kept pace. But efforts directed to the determination of the causes of the so-called degenerative circulatory diseases, and to the discovery of effective treatments, have met failure at almost every turn. Of late years, indeed, these conditions, whether by reason of better diagnosis, greater population of susceptible age groups or other changes, appear to be increasing in frequency.

It is with more than usual interest, then, that one reads of the experiments of Goldblatt and his collaborators[1] at Western Reserve University. These investigators report, for the first time, the successful production of persistent arterial hypertension in animals; this was accomplished by establishing chronic reduction of the flow of blood to the kidneys. Eleven healthy dogs were prepared with one carotid artery looped through a short tube of skin, after the method of Van Leersum, to permit accurate observations of blood pressure at frequent intervals; blood and urine examinations were made to rule out the presence of renal disease. Systolic blood pressure readings were taken daily for at least two months to establish control levels; the animals were then operated on under aseptic conditions, and adjustable silver clamps were applied to the renal arteries. In some of the animals constriction was made great at the beginning, while in others it was made moderate at first and subsequently increased one or more times. Constriction of one renal artery was followed by a moderate or slight rise of pressure, which tended to return to the level of the control period. Following the production of bilateral renal ischemia, however, the systolic blood pressure rose to a variable degree in all the animals. Pressures persisting between 200 and 240 mm. of mercury were common; some approached 300. In two of the animals the clamping of both renal arteries was made almost complete from the beginning; the rise of blood pressure that followed was accompanied by the development of uremia, which rapidly proved fatal. In these animals the amounts of urea nitrogen, total nonprotein nitrogen and creatinine in the blood increased progressively, while the urea clearance and the output of phenolsulphonphthalein decreased progressively until death. The remaining animals survived for long periods with large persistent elevations in blood pressure, five of them being alive at the end of fifteen months; in only a few of these nine did tests reveal any decrease in kidney function. In one animal showing a persistent elevation of blood

1. Goldblatt, Harry; Lynch, J.; Hanzal, R. F., and Summerville, W. W.: J. Exper. Med. **59**: 347 (March) 1934.

pressure for more than fifteen months, the urea clearance was reduced to about 50 per cent of the mean control level. In others, however, either no change occurred in urea clearance or only slight preliminary reduction, with rapid return to normal. The concentrations of urea, total nonprotein nitrogen, creatinine and guanidine in the blood all remained within normal limits.

Goldblatt and his associates also investigated the effects of constriction of the splenic and both femoral arteries in one animal and of extirpation of one suprarenal gland with denervation and destruction of the medulla of the other in a second dog; neither of these procedures had any significant effect on blood pressure, which then rose in both instances after constriction of the renal arteries.

Ischemia limited to the kidneys appears to be a sufficient condition for the production of persistently elevated systolic blood pressure. The hypertension produced by this means resembles closely that associated either with so-called benign nephrosclerosis or with so-called malignant nephrosclerosis in man, depending on whether the constriction of the arteries is moderate or severe.

The Cleveland investigators deserve commendation for this fundamental contribution, ingeniously conceived and meticulously executed. Their work throws new light on the pathogenesis of hypertension, at least of the type associated with renal vascular disease.

Current Comment

SOCIALIZATION OF MEDICAL PRACTICE

In the department of Medical Economics in this issue of THE JOURNAL appears a summary of a report on the socialization of medical practice, including health insurance, made by the Bureau of Economics of the American Medical Association. The report appears in full in the *American Medical Association Bulletin*, which is sent to all Fellows. Others desiring copies of the *Bulletin* may send their requests to the headquarters office. The physician who is familiar with the history of the attitude of the American medical profession toward changes in the nature of medical practice realizes that this question has not been neglected by the House of Delegates of the American Medical Association. Immediately following the introduction of socialized medicine in Great Britain, as represented by the panel system, the House of Delegates of the American Medical Association authorized a special study of social health insurance. At subsequent meetings, the House of Delegates expressed itself in no uncertain terms relative to invasion by the state in the affairs of medicine. A few years ago it instructed the Board of Trustees and the Officers of the American Medical Association to use THE JOURNAL and all the facilities of the Association in opposing the introduction of state medicine in any form. That has been the assigned task of the officials at the headquarters of the Association. Moreover, the endorsement in principle of the Minority Report of the Committee on the Costs of Medical Care at the annual session of the American Medical Association reaffirmed this policy for officials of the American Medical Association. There seem to be evidences that official bodies representing the medical profession in some of the states are interested in a change of this policy of the House of Delegates. It remains to be seen, therefore, whether the American medical profession, as represented by organized medicine through the House of Delegates, wishes to continue its policy of careful experimentation with new methods of medical practice, observing the ethics and traditions of medicine, or whether it is ready to endorse on a nation-wide scale some step toward the socialization of medical care. Obviously, the medical profession has never been confronted at an annual session with questions of greater moment for its determination.

SECRETION OF PANCREATIC JUICE

Thirty-two years ago the English physiologists Bayliss and Starling formulated the theory that the secretion of pancreatic juice is brought about by a humoral mechanism. According to them the entrance of gastric acid into the duodenum somehow promoted the formation or liberation of a chemical substance, designated as secretin, that is absorbed and carried to the pancreas, where it acts as a stimulus to secretion. Participation of the nervous system was excluded by the observation that the secretory phenomenon is observed even when all nervous connections between the intestine and the pancreas are severed. This classic experiment initiated the modern conception of hormone stimulation of functional organs. The fundamental features of the hypothesis have retained acceptance though the views and experiments of Bayliss and Starling have been challenged from time to time. One item for debate has been the question as to whether a prosecretin really exists; that is, whether secretin is not always present preformed in the intestinal wall. Another uncertainty has centered in the reputed necessity for acid in the initiation of the hormone reactions. Thus the English physiologist John Mellanby has suggested that, as soon as bile reaches the duodenum, bile salts are in part absorbed through its mucosa and carry preformed secretin along with them into the portal circulation. By an ingenious experiment whereby the volumes of secreted bile and pancreatic juice can be measured every day and each of them withdrawn from the alimentary tract or replaced at will, Dragstedt and Woodbury [1] of the University of Chicago have demonstrated, at least for the species on which all the classic tests have been undertaken, that the presence of bile in the duodenum cannot be considered essential for the secretion of pancreatic juice. The ingestion of food, even in the absence of bile, promotes the usual pancreatic secretory response. In other words, bile salts cannot therefore be considered essential either for the activation of the specific pancreatic stimulant or for its passage into the blood in effective form.

1. Dragstedt, L. R., and Woodbury, R. A.: The Relation of Bile to the Secretion of Pancreatic Juice, Am. J. Physiol. **107:** 584 (March) 1934.

Medical Economics

"THE INSURANCE PRINCIPLE IN THE PRACTICE OF MEDICINE"

A Summary of a Report Prepared by the Bureau of Medical Economics

The various forms of social insurance aim to give protection against social uncertainties. Their scope is usually restricted to those whose incomes are insufficient to permit the accumulation of a reserve to meet social contingencies.

A recent German writer[1] thus describes the origin of insurance:

> Social insurance is the child of its period. It is the result of a compulsory urge to organization and had its origin in the mechanical conception of life. . . .
>
> The increasing industrialization of Germany had need of a healthy, efficient working force for its development, and the Kaiser needed soldiers. . . .
>
> Bismarck's original plan arose out of a combination of the capitalistic with the feudal and fraternal mental attitude. Governmental care was to make it clear to the eyes of the workers how much the state cared for them and thereby make them contented and loyal.

Austria, with much the same stage of development, followed in 1887. Other nations showed few signs of following this example during the nineteenth century. But the first decade of the present century saw a remarkably rapid expansion of sickness insurance among European states. Tables 1, 2 and 3 give the date of the introduction of such systems among the principal nations and also something of the extent of their expansion within those nations.

Sickness insurance was at first directed against the unemployment caused by sickness. All the emphasis was placed on the financial assistance given to the wage earner while sick. There was little consideration of the necessity and value of medical care.

Sickness insurance is always urged in the interests of underpaid workers, but these have never been responsible for or even highly favorable to its enactment. Laborers have rather demanded wages sufficiently high to enable the recipients to pay their own medical expenses. In no country have the unions led a demand for sickness insurance. In nearly every country the first attempt to collect sickness insurance contributions from employees has met with resistance. It was so in Germany a half century ago and in France in 1931. The political parties of labor have never made sickness insurance one of their urgent planks. No system owes its introduction primarily to any socialist or labor party.

The story of Germany is typical and has been told many times. Bismarck introduced the law as a weapon against the Social Democrats, who voted unanimously against it. For years this party fought all forms of social insurance, denouncing them as a "beggars' soup kettle," from which relief was ladled out to prevent discontent. Then the Social Democrats captured the insurance societies and made them a part of their political machine, whereupon these institutions became "sacred cows" to be defended against all criticism. The benefits of social insurance, which Bismarck expected to use to buy support for the imperial government, were then used to buy Social Democratic votes.[2] The latest development has been the seizure of these institutions by the Nazis, who are now using them to crush out Social Democracy.

The situation was much the same in other countries. In an address to the International Conference of Insurance Societies, Dr. Winter, delegate from Czechoslovakia, said:[3]

> Sickness insurance was introduced into the countries of Central Europe, into Germany, and later into Austria, at a time when the working class was largely powerless in the political field. The motives, always political, which led to its introduction are well known. The working class was not represented in the political institutions but it was left in control of the insurance societies.

He then describes how this control of the societies was turned into a political weapon. Of Austria we are told:[4]

> The societies are the pillars of the political parties. They have been so anxious to give benefits to the insured that they are today in a miserable financial condition. In spite of the magnificent palaces they have constructed to shelter their services, all this is only a deceptive show.

Great Britain repeats the story. The law was enacted as a political measure by Lloyd George, and the societies at once became political forces, antagonistic to many of the best features of insurance.

Sickness insurance has been introduced everywhere with very little consultation with, and often largely against the wishes of, the workers who were to become the patients, and the physicians who were to give the medical service.

One of the most striking conclusions that arise from any comparative historical study of sickness insurance systems is their highly experimental character. This is true of the oldest as well as the youngest systems. After a half century of existence, those of Germany and Austria are still changing with great rapidity. These changes are by no means due exclusively to general political, industrial or financial transformations, which often fundamentally alter the workings of the system. They are much more due to constant dissatisfaction with details.

This continuous tinkering creates an extremely complex set of institutions. There are 3,000 sections in the German laws on sickness insurance, and this is only the beginning. The various institutions for the regulation of insurance and the settlement of disputes between contending parties within the system are making new modifications and interpretations almost daily.[5]

An examination of the column headed "Date of Enactment of Law" in table 1 will give some impression of the number of more important fundamental legislative changes in the various systems. A failure to recognize this wide diversity of time and place in the workings of sickness insurance is largely responsible for the contradictory reports and opinions expressed by those who discuss such insurance.

An examination of tables 1, 2 and 3 would supply the advocate of almost anything in regard to insurance with facts to support nearly any argument. This might appear to suggest a simple solution. It might be argued that, if one were to pick out all the desirable features from each system and combine them, one might develop a perfect system. Unfortunately, the problem is not so simple. Some of the desirable and undesirable features in nearly every system are so closely linked by administrative or political considerations as to make separation difficult if not impossible.

The changes that took place in the evolution of the various systems often profoundly altered their character. The early groups of fellow workers had little to fear from malingering. Members constantly visited the sick and often assisted in their care. Before sickness insurance the societies were truly self governing and sufficiently democratic to insure that their officials, who were almost always unpaid, truly represented the membership. They had no need for elaborate financial organizations or expensive headquarters.[6]

The supposition that these conditions could be carried over into the gigantic societies required for the insurance of millions is responsible for many of the evils of present systems. The claim that the great financial and semipolice organizations of paid visitors and supervising physicians with their intricate statistical reports of expenses and rate of so-called sicknesses are but a larger growth of the old fraternal societies is but one of the many examples of failure to recognize that a great change in the quantity of any social phenomena almost inevitably changes the quality and character of the institutions involved.

1. Pick, Gottlieb: Socialversicherung und Aerzte, 1931, pp. 5-6. See also von Weizsacker, Victor: Soziale Krankheit und der soziale Gesundung, 1930, p. 7.

2. Baeumer, Waldemar: Die Krankenversicherung, 1930, pp. 9-14.

3. Compte rendu, rapports et resolutions, Quatrième assemblée générale, Conférence internationale des Unions nationales de sociétés mutuelles et de caisses d'assurance-maladie, Geneva, 1930, p. 35.

4. Narbeshuber, Carl (president of the Austrian Medical Association): Revue internationale de médecine professionelle et sociale, November 1925, p. 54.

5. "The modifications of the legal institutions have been incessant in Germany, an indication of the difficulty of the social and technical problem to be solved. . . . It is only by *personal solutions*, the English method of trial and error, by the acceptance of an empirical progression, that the best results are obtained" (italics in original): Eyland, J. M.: Les assurances sociales en France, 1929, pp. 91-92.

6. McCleary, G. F.: National Health Insurance, 1932, pp. 7-19. International Labor Office, Voluntary Health Insurance, 1927. Lehman, Helmut: Aerzte und Krankenkassen, 1929, pp. 7 et seq.

TABLE 1.—*Provisions of National Sickness Insurance Systems* *

Date of Enactment of Law	Qualifications for Insured		Population	Number Insured and Beneficiaries						Physicians		
				Number Insured				Total Beneficiaries, Including Families		Total in Country	Engaged in Insurance	
				Compulsory		Voluntary						
	Compulsory	Voluntary		Number	Per Cent	Number	Per Cent	Number	Per Cent		Number	Per Cent
Germany												
Industry, 6/15/83; Commerce, 1885; Industry, 1886	All salaried and wage workers, domestic apprentices; professors, teachers, etc., under 2,700 M. annually	a. Former compulsorily insured b. Small employers, 2,700 M. maximum c. Families of insured	62,000,000	19,800,000	31.4	1,600,000	2.5	40,000,000	63.5	50,000	35,000	70
Austria												
1887; modified 28 times since and extended	All wage workers (no wage limit) except pt artisans and independent workers	a. Former compulsorily insured b. Small employers	6,500,000	.....	....	63,000	1.0	4,800,000	76.0	8,000	7,500	94
Bulgaria												
1918; modified 3/6/24 and 2/2/29	All employed workers and small employers; limit, 2,000 Swiss Fr.	a. Former compulsorily insured b. Public employees c. Merchants d. Liberal professions (limit 2,000 levas)	5,800,000	230,000	3.9	2,000 to 3,000	0.29	Does not include family	....	2,300	1,100	48
Belgium												
Proposed	Proposed; all wage workers	.....	8,000,000	2,200,000 (proposed)	26.0	?	....	6,000,000 (proposed)	75.0	5,500	.....	..
Denmark												
1892; modified 1915, 1921-1927, 1933	No compulsory†	All persons with low incomes, regardless of occupation	3,500,000	No compulsory†	....	1,538,000	65.1	Does not include family	65.1	2,000	Great majority	..
Danzig												
Same as Germany	All wage workers under 4,500	All persons insured for 26 weeks of preceding year	407,500	?	....	?	....	200,000	49.0	282	200	67
Esthonia												
4/23/12; modified 1917	All industrial workers	Very few in private organizations	1,200,000	40,000	3.3	.....	....	90,000	7.5	.....	.....	..
France												
4/30/30	All earning less than 18,000 Fr. (15,000 Fr. in provinces)	a. Former compulsory b. All earning less than 15,000 Fr.	41,000,000	8,000,000	19.0	?	?	12,000,000	29.0	27,000	18,000 (?)	66
Great Britain												
1911; many changes; new law, 1924	a. All manual workers b. All nonmanual receiving less than £250 annually	a. Former compulsory b. Those authorized by the minister of health c. Earning less than £160 annually	44,500,000	17,500,000	....	200,000	....	Does not include family	....	36,000	17,700	49
Holland												
6/5/13; in force but not as whole, since 1913	(Accident insurance only); all workers under 3,000 Fl. ann.	Open to all	7,800,000	1,227,500	.... (accident only)	1,160,000	....	Does not include family	....	4,450	3,700	84
Hungary												
1891	All workers under 24,000,000 Cr.	a. Former compulsory b. Independent artisans c. Small employers; limit, 8,400,000 Cr.	8,000,000	1,700,000	9.3	Not stated	....	Not stated	....	.....	.....	..
Latvia												
1922	.....	.....	1,900,000	145,000	7.0	.....	....	240,000	12.5	1,062	600	56
Luxemburg												
7/31/01; new law, 12/17/29	All workers in commerce and industry	Not compulsorily insured (domestics, small employers, etc.); limit, 12,500 Fr.	285,000	64,800	22.7	416	0.15	110,000	38.6	180	165	80
Norway												
1911; amended 1915 and 1930	All workers under 5,400 Kr.	All receiving less than 5,400 Kr. annually	2,800,000	550,000	19.6	80,000	2.85	1,500,000	43.5	1,800	"Nearly all"	..
Palestine												
Proposed; voluntary at present	No compulsory insurance	All members of labor organizations	919,400	(None)	....	18,000	....	35,000	....	600	70	11.6
Poland												
5/19/20	All employees (no wage limit) save agricultural, ecclesiastic and governmental	Former compulsory under 45 years of age	31,000,000	3,500,000	11.3	(Insignificant)	....	8,000,000	25.8	7,500	2,700	36
Sweden												
7/4/10	No compulsory	All sickness insurance is voluntary	6,000,000	(None)	....	933,000	15.5	3,628,000	60.4	2,300	"Nearly all"	..
Switzerland												
6/13/11	Not compulsory except in certain cantons	All Swiss citizens	4,100,000	(None)	....	1,400,000	34.0	Does not include family	....	3,350	2,700	80
Czechoslovakia												
1919	All wage workers	No voluntary	14,000,000	2,000,000	19.0	56,000	....	10,000,000	73.5	8,000	6,400	80
Yugoslavia												
1922	All workers except domestics, agricultural and governmental	Former compulsory; all wage workers exempt from compulsory	13,500,000	560,000	4.2	2,600	0.02	1,250,000	9.3	3,700	1,300	33.2
Greece												
....	All workers, employees or domestic	a. Former compulsory b. Home workers										

* Compiled from replies to questionnaires by International Medical Association, as published in Revue internationale de médecine professionnelle et sociale, August 1931, corrected from all available later information.
† Made compulsory in October 1933.

This development has almost entirely removed one very important ingredient from the original composition of insurance societies; namely, that element of mutual confidence, personal acquaintance and sense of individual responsibility on the part of the members.

Just how this change of attitude has affected all the workings of sickness insurance is described by a German physician:[7]

> The insured also believe, since they have long contributed to the cost of insurance, that after a certain time *they have a right* to receive some money from it, and only a few workers realize that the existence of an insurance system depends on regular payments from all in order that the individual, as an exception, may obtain something. It is easy to implant the idea in the consciousness of a simple man: "Now that I have paid so long, I will at last get something out of my insurance!"
>
> The fact that demands for damages and for raising the rate of payment are practically unlimited and cost the insured nothing to bring, and that, if denied, decisions of higher officials may be demanded *without cost or danger*, creates covetousness, quarrelsomeness and simulation: one can **at least try everything,** and try to drag out a little more; trying costs nothing.
>
> In this way the *ominous will to be sick* is artificially created, and social institutions are many times practically compelled to put a premium on sickness, laziness, exaggeration and deceit, so that the individual, **who is in a manner the innocent** victim of these compulsory institutions, cannot make any special individual objection. Since legal compulsion has today brought the majority of the population within the scope of social insurance, a constantly increasing proportion of the workers is brought into a condition of subjection to these institutions. Present-day Germany has been compared to a great *lazaret, or home for cripples*, where each individual is trying to get as much as possible out of the gigantic pension cup, which is kept filled by ever higher contributions. Every seventh German is today a social pensioner.

The management of these institutions also tended to become a separate personality seeking to advance the prestige of the institution rather than the welfare of the members. As a result every system of insurance has developed a great bureaucracy which has an important effect on many phases of organized medical service.

In Germany the number of employees of the krankenkassen has grown to be practically the same as the total number of physicians employed in giving the medical service.[8] The same ratio seems to hold true in other countries as soon as this bureaucratic tendency has had time to develop. There is continual criticism of the sums taken from the contributions for the erection and maintenance of showy headquarters.[9]

These powerful political institutions then became the administrators of a national medical service often owning much of the medical equipment and directing the employed physicians.

These societies seek constantly to increase the number of insured and to add to the benefits given. Such expansion increases their power both as administrators and in politics. In pressing for expansion they always emphasize the benefits directly controlled by the society and belittle those which are controlled by the physician.

Every voluntary system tends to become compulsory. Social insurance then becomes an instrument for the compulsory redistribution of the income of its members. Cash and medical benefits under insurance, unlike police and fire protection, public hygiene, education, and the like, are distributed unequally to individuals according to their personal needs. Such redistribution in a democratic society always becomes a political issue.

The expenses of administration tend to increase in relation to expenses of benefits.

No reliable standards exist for the comparison of medical service under insurance with that under private practice. There is, however, quite general agreement as to certain tendencies. The medical service becomes more superficial, the physician is inclined to send difficult patients to the hospital, and there is a great increase in medication.

When a system of sickness insurance is being advocated, great stress is laid on the value of the general medical service that is to be given to the contributors in their homes and the offices of the physicians. After a system is introduced, one may search in vain through all the voluminous reports and "selling literature" of the societies to find any praise of this service. All emphasis is laid on the institutions, owned, or at least controlled, by the societies, and the "additional benefits" that are organized and managed directly by the insurance carriers.

These conditions have led to an exaggeration of the value of the institutional services in comparison with the personal care of the physician, thus leading to a progressive mechanization of the medical service.[10]

Such institutions when owned by the society become weapons in the fight to control physicians. There is also general dissatisfaction against wasteful expenditures.

The medical services in sickness insurance are always advocated as a means of reducing sickness. But much of the "sickness" that is treated under insurance is a peculiar phenomenon created in some degree by insurance itself. The amount of sickness is often determined to a large extent by such economic phenomena as loss of employment, unsatisfactory working conditions and the desire for cash payments. The consequence is that the morbidity statistics furnished by insurance operation are seldom comparable with similar statistics elsewhere.[11]

The first conclusion which a study of such statistics would justify is that insurance is a sort of deadly infection, the introduction of which causes an increasing amount of sickness.

The German system has existed sufficiently long to demonstrate this typical trend. Chart 1, taken from Werner Lincke, "Krankenstand und Arbeitswille," page 38, shows the fluctuations of this sort of "morbidity" from 1888 to 1913. The sudden upward movements of the line do not indicate deadly epidemics of disease, so often as some sort of industrial change. This is shown by chart 2, taken from the same source (p. 154), where the same kind of "morbidity" in two of the largest societies is plotted in comparison with a line showing the cyclic movements of industry during the same period.

Perhaps the most startling proof of the character of the "sickness" treated by insurance was offered by the effects of inflation. In 1923 the money given as cash benefits was so nearly valueless that it was not worth while being "sick" to get it. As a result, the number of days of "sickness" as measured by "inability to work" fell off over 100,000,000, or about 50 per cent.[12]

Meanwhile the physicians continued their work of caring for the insured, receiving their pay in money that had lost practically all purchasing value. "From the autumn of 1922 until the end of 1923 almost the entire medical profession of Germany carried on their insurance practice for practically worthless payment."

There have been many attempts to explain this increased morbidity which is common to practically all insurance systems. It is said that increased average longevity is responsible, but the statistics of those in the prime of life, between 30 and 39 years, shows an equally rapid increase.

Nor is it entirely due to the desire to obtain cash relief, as in those systems in which dependents are treated without the right of cash relief there is a similar increase.[13]

One would expect that the excessive medical service provided the insured would result in a reduced infant mortality. Table 4 at least throws doubt on the existence of any such reduction through insurance.[14] The significant fact about this table is not the difference in mortality rate between the working class and the wealthy class, although the former alone has the unlimited insurance medical service. Such differences due to

7. Kirschner, M.: Zur Praxis der Begutachtung, 1931, pp. 7-8 (italics in original). See also von Weizsäcker, Victor: Soziale Krankheit und der soziale Gesundung, 1930, pp. 7-8. Report of the Departmental Committee on Sickness Benefit Claims under the National Insurance Act (Great Britain), 1914, p. 83.

8. Pick, Gottlieb: Sozialversicherung und Aerzte, 1932, p. 40. Than, Arthur: Ein systematischer Ueberblick über die gesamte deutsche Sozialversicherung, 1931, p. 8.

9. Baeumer, Waldemar: Die Krankenversicherung, jetzt ein Fluch, umgestaltet ein Segen für das Volk, 1930, p. 14. Wunderlich, Frieda: Der Kampf um die Sozialversicherung, 1930, p. 17. Similar developments in Cuba have been described by Leland, R. G.: The Practice of Medicine in Cuba, A. M. A. Bulletin, June 1933, pp. 92-96.

10. Newsholme, Sir Arthur: Internationale Studien **2**:241-242. Helbich, Karl: Aerzte und Sozialversicherung in der Tschechoslowakischen Republic, Die Aerztfrage, p. 161. Baeumer, Waldemar: Die Krankenversicherung, pp. 32-39.

11. The unreliability of all morbidity statistics under insurance is discussed by Beyrodt, Gustav: Die versicherungswissenschaftlichen Grundlagen der Sozialversicherung, Archiv für Soziale Hygiene und Demographie, September 1932, p. 345.

12. Baeumer, Waldemar: Die Krankenversicherung, jetzt ein Fluch, umgestaltet ein Segen für das Volk, 1930, p. 40.

13. Finkenrath, Kurt: Aus der Krankenversicherung in Oesterreich, Deutsche medizinische Wochenschrift, Aug. 8, 1930, p. 1356.

14. Hofbauer, Albert (vertrauensarzt): Der gegenwärtigen Standpunkt der Krankenkassen zur Sozialhygiene und Gesundsheitsfürsorge, Zeitschrift für Gesundheitsverwaltung und Gesundheitsfürsorge, Feb. 20, 1932, p. 7.

TABLE 2.—*Provisions of National Sickness Insurance Systems*

Nation	Services Furnished: General Practice and Specialist	Drugs	Appliances	Hospitalization	Preventorium and Sanatorium	Operations	Confinements	Cash Provisions: Day on Which Cash Benefit Starts	Reduction During Hospitalization	Relation of Cash Payment to Average Wage
Germany	Yes	Yes	Minor accessories only	Not legally but generally	No	Yes	Yes	4	50%	¾ with a maximum
Austria	Yes	Yes, except specialties	Yes	Yes (for 4 weeks)	Yes	Yes	Yes	Legally 4; usually 1	50% goes to family	60%
Bulgaria	Yes	Yes	Yes	Yes	Yes	Yes	Yes	1	40%	50-70%
Belgium	Yes	Yes	Yes	Yes	Yes	Yes	Yes	4	No provision	Varies
Denmark	Yes	Yes, ¾	Minor accessories only	Yes	Yes	Yes	Yes	1	Reduced to meet cost	Varies
Danzig	Yes	Yes	In part	Yes	No	Yes	No	3	50%	80%
Esthonia	Yes	Yes	Yes	Yes	Yes	Yes	Yes	4	Varies	50-60%
France	Yes	Yes	Yes	Yes	Yes	Yes	Yes	6	Unmarried, 75%; married, no children, 50%; head of family, 33%	50%
Great Britain	Yes; no specialist	Yes	Minor accessories only	Not legally but sometimes	Yes	No	Yes	4	No right to hospitalization	No relation to wages
Holland	No sickness insurance—but all risks are covered by accident insurance, except confinements							3	60%; sickness insurance not yet in force	Maximum 80%
Hungary	Yes	Yes	Minor accessories only	Yes	?	Yes	Yes	1	?	60%
Latvia	Yes	Yes	Yes	Yes	Yes	Yes	Yes			
Luxemburg	Yes	Yes	Minor accessories only	Yes	Yes	Yes	Yes	3	Unmarried, 70%; married, 50%	50%
Norway	Yes	No	No	Yes	Yes	Yes	Yes	3	Unmarried, 100%; married, 75-25%	Varies
Palestine	Yes	Yes	No	Yes	Yes	Yes	Yes	3	Unmarried, 100%; married, 50%	Varies
Poland	Yes	Yes	Yes	Yes	Yes	Yes	Yes	3	?	?
Sweden	Yes	Yes	Yes	Yes	Yes	Yes	Yes	1	100%	60% (proposed)
Switzerland	Yes	Yes	No	No; voluntary	No; voluntary	Yes	Yes	1	Varies	Varies
Czechoslavakia	Yes	Yes	Minor accessories only	Yes	Yes	Yes	Yes	1	50%	60%
Yugoslavia	Yes	Yes	Minor accessories only	Not legally; yes, practically	No	Yes	Yes	1	?	?
Greece	....	....	....	....	....	Medical service always furnished on first day of sickness				

TABLE 3.—*Provisions of National Sickness Insurance Systems*

Nation	Choice of Doctor: Free Choice	Restricted	No Free Choice	Professional Secrecy: Completely Respected	Not Respected Indirectly	Not Respected Directly	Freedom of Prescription*: Absolute†	Regulated Not for Specialties	No Liberty; Lists as Permitted Drugs, etc.	Usual Form of Payment: Periodically by Territory	Per Head	Per Medical Act	Satisfaction: Of Insured	Of Physicians
Germany	..	+	..	..	..	+	..	..	+	+ Part	+ Part	+ Schedule Part	No	No
Austria	In provinces	Vienna	..	..	..	+	..	..	+	+ Part	+	+ Part	No	No
Bulgaria	+‡	..	..	..	..	+	..	+	..	..	..	+	Yes	Yes
Belgium	..	Proposed	..	..	+ proposed	..	..	+	..	..	..	..	..	..
Denmark	In provinces	Copenhagen	..	..	+	..	+	..	..	+ City	..	+ Rural	Yes	Yes
Danzig	+	..	..	..	..	+	..	..	+	+ Part	+ Part	..	No	No
Esthonia	..	+	..	+	..	..	..	..	+	..	..	+	No	No
France	+	..	..	+	..	..	+	..	..	..	..	+	No	Yes
Great Britain	+	..	..	..	+	..	+	..	..	..	+	..	Yes	Yes
Holland	+	..	..	..	+	..	+	..	..	..	..	..	Yes	Yes
Hungary	..	..	+	..	..	..	..	..	..	+	..	+	No	No
Latvia	..	+	..	..	..	..	..	..	..	..	..	+	No	No
Luxemburg	+	..	..	+	..	..	+	..	..	..	..	+	No	No
Norway	+	..	..	..	..	+	+	..	..	..	..	+	No	No
Palestine	..	..	+	..	+	..	..	..	..	+	..	+	No	No
Poland	..	..	+	..	..	..	..	..	..	+ Part	..	+ Part	No	No
Sweden	+	..	..	..	..	+	+	..	..	..	..	+	No	Yes
Switzerland	+	..	..	..	..	+	..	..	+	+ In mountains	..	+	No	No
Czechoslovakia	..	+	..	..	..	+	..	..	..	+ Part	+ Part	+ Part	No	No
Yugoslavia	..	..	+	..	..	..	..	..	..	+	+	..	Yes	No

* Some replies are not specific.
† Except for flagrant abuses.
‡ See text p. 1617.

income exist in other countries. It is far more significant that the rate of reduction in twenty-six years in the working class, which started with a far higher mortality than the wealthy, is less than in the wealthy class.

This increase of sickness is not wholly or even largely due to conscious malingering. German physicians estimate that from 60 to 75 per cent of the insured who ask for medical service are in no condition of sickness to derive any special benefit from such services. They also agree that not more than 5 per cent are conscious malingerers.

The foremost psychiatrists of insurance countries agree that a large share of all the sickness treated under insurance is complicated by neuroses for which the situations and conflicts created by insurance are largely responsible.[15]

E. Blum,[16] a psychiatrist of Berne, Switzerland, points out that sickness returns the adult to the attitude of a child in which he is ready to receive care without any reciprocal action

15. von Weizsacker, Victor: Soziale Krankheit und soziale Gesundung, 1930, pp. 8-9 et passim; Ueber den Begriff der Arbeitsfähigkeit, Deutsche med. Wchnschr. **57**: 1653 (Sept. 25), 1696 (Oct. 2) 1931. Erwin Liek (Soziale Versicherungren und Volksgesundheit, p. 20) says: "Every new insurance . . . means a new source of sickness for our people." Pick, Gottlieb: Sozialversicherung und Arzt, 1931, pp. 13-29.

16. Blum, E.: Gesundungsgewissen und Sozialversicherung, Schweiz. Ztschr. f. Hyg., July and August 1931, pp. 733-750. Italics in original. Fisher, V. E.: Introduction to Abdominal Psychology, 1929, pp. 174-175.

on his part. "The effort toward adjustment to reality," he says, "is replaced by the desire for indulgence, nursing and maintenance of the infantile situation. So we arrive at the remarkable fact that the sick seek to gain pleasure and profit from the condition of sickness and, in spite of their sufferings and burdens, basically do not wish to get well. So we speak of a *flight* to sickness and of a sickness advantage (krankheitsgewinn).

Dr. Blum concludes his analysis with the statement:

So we arrive at the tragic fact that an institution created in response to the highest social impulses and to serve such social purposes encourages the antisocial attitude (asocialität) of the sick, undermines the desire for recovery and endangers health.

Against these evils the insurance system aims to protect itself by compelling the physician to act as a sort of detective and by a system of restrictions and supervisions. The patient knows all about these restrictions, and if he does not receive the latest highly advertised and expensive drugs or the most sensational and fashionable treatment, with costly x-ray or other machines, he is convinced that this is not because these treatments are unnecessary but because the society's orders for economy prevent their use in his case.

The most severe criticism of medical service under insurance is not based on the occasional examples of overworked practitioners, with resulting hasty careless diagnosis and treatment, but rather on the atmosphere of suspicion and antagonism, which destroys the very foundations of good service. Payment into a general fund over which the insured has no control, and from which he can get back his money, to which, rightly or wrongly, he believes he is entitled, only by being sick, creates the conditions described.

THE PHYSICIAN IN SICKNESS INSURANCE

The same story is repeated in the evolution of nearly every insurance system. In the beginning the physicians cooperated and often contributed their services. When the physicians resisted the efforts to debase medical service and the medical profession, the result was a continuous battle between the physician and the insurance administrators.

The first effect of insurance is to pay the physician for much of the work that he did before for charity and thereby to increase many medical incomes. Later when the medical profession has become dependent on the insurance society, work is increased and income reduced.

The insurance administrators in all countries try to control admission to insurance practice. When this practice dominates the field, as it does in most European countries today, this practically places the insurance societies in the position of licensing bodies. The societies next seek to influence education so as to prepare the physician for the sort of medical practice that the insurance society thinks necessary.

Because of the character of insurance practice, observers hold that there is a tendency to neglect graduate work. Concerning this point Kurt Finkenrath says:[17]

I made a statistical study in 1919 to determine from what sections of Berlin the majority of the physicians came to attend the graduate courses of the Central Committee of the Kaiserin Friederich-Haus. This made clear the fact that three fourths of all participants came from the West and Southwest and that all other sections of Greater Berlin furnished only one fourth. From this division the conclusion was drawn that the physicians who had an interest in further education were overwhelmingly those who still had some share of private practice, while the great mass of the insurance physicians were far from desiring any further education.

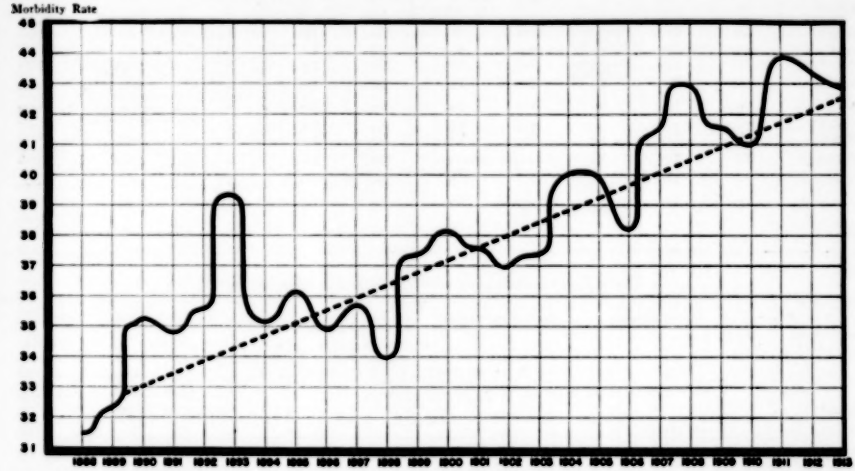

Chart 1.—Morbidity in German local insurance societies (ortskrankenkassen): Solid line is smoothed curve of actual morbidity rates as measured by certified cases of incapacity for work; the trend line is dotted.

This conflict between the physician and the society has led to the formation on both sides of international organizations. The International Association of Physicians after a most exhaustive research drew up resolutions on the attitude of the medical profession to sickness insurance. It must be remembered that this organization did not have before it the question of whether insurance should be introduced but was faced with an accepted fact in the shape of an existing system. The association declared its general approval of the principles of social insurance and then set forth at great length the principles which it felt must be maintained in the interest of good medical service.

The medical service must remain autonomous as to all questions concerning the practice of medicine.

Insurance should be "applied only to those persons who are incapable of meeting the necessary costs of medical care in case of sickness from their own resources."

The insured should always share in the cost of medical care and drugs.

There should be complete free choice of physician permitting all licensed physicians who accept insurance regulations to share in the care of the sick.

Professional secrecy should be maintained.

17. Finkenrath, Kurt: Krankenhilfe und Gesundheitsfürsorge durch die Aerzteshaft, pp. 119-121. The attitude of the insurance societies is presented by Franz Korris, secretary, German Insurance Societies of Czechoslovakia, Compte rendu, p. 75.

There should be no restriction of the right to prescribe, although the medical organizations should always "seek to suppress all expensive and superfluous medication."

Payments should not be by a fixed sum per person or by salary. (The British Medical Association objected to this rule and stated that it preferred the system now existing in England.)

Sickness insurance is one phase of the effort of industrial civilization to force a recalcitrant profession into industrial patterns. Such insurance means that a professional service is to be supplied under compulsion. The medical profession maintains that the very character of the service is such that it will be destroyed by such compulsion.

Advocates of sickness insurance usually deny any such attack on professional status, yet the official statement of the International Conference of National Unions of Mutual Societies and Sickness Insurance Societies, which includes the carriers of sickness insurance in all the principal European nations, has declared that only through mechanization and contract

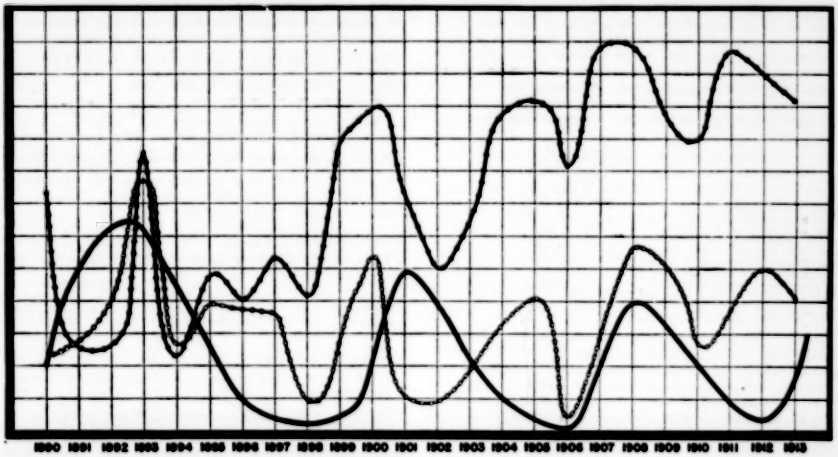

Chart 2.—Morbidity and business conditions, 1890-1913: Solid line shows depressions and prosperity in reverse, with crises at high and prosperity at low points; lower open line with circles shows sickness record of Pommeranian local societies (ortskrankenkassen); upper line with solid dots, of industrial societies (betriebskrankenkassen).

employment of the physician can insurance be successfully conducted.[18]

This position has been officially endorsed by the International Labor Office.[19]

The majority report of the Committee on the Costs of Medical Care and the writings in support of sickness insurance schemes show the same desire to develop the "large exploitation" of medical practice through groups, medical centers, clinics and insurance, and the same tendency to place the control of such institutions under lay management. The whole history of industrial and contract practice, both within and without the system of workmen's compensation, repeats the story. Everywhere there is the same effort to destroy professional status and personal contacts between producers and consumers of professional service, and to substitute the contract relations of a lay employer hiring physicians supplying an impersonal market.

Sickness insurance demands the expenditure of immense sums, which experience has shown produce no reduction in morbidity or mortality rates. On the other hand there is ample proof that the expenditure of similar sums in public health service, sanitation, pure food control, immunization and various other directions will improve the public health.

German and English observers question very much whether the $300,000,000 in the former country and the $160,000,000 in the latter spent annually for insurance would not produce far better effects on the public health if expended in other directions.[20]

It is difficult to say clearly to what extent any system of sickness insurance is satisfactory to the people involved. The political power of the insurance societies makes any movement for the abolition of an existing system practically impossible. The conditions at the time of the origin of the English system were infinitely worse in regard to medical care than now prevails in the United States.

The Majority Report of the Committee on the Costs of Medical Care, which recommends sickness insurance, says:[21] "It is probably true that in the United States, except for some rural areas, a much larger amount of medical service is available, and is actually obtained, even by low-wage-earners, than was the case in any European country during the period when its health insurance system was developing." Under such conditions as prevailed in these European countries, almost any change was an improvement.

The questionnaire of the International Association of Physicians included a query on the extent of satisfaction to the insured and the physician. The replies are given in the last two columns of table 3. Of the four nations that reported general satisfaction, two, Bulgaria and Denmark, have so completely transformed their system since these replies were given as to raise serious question as to present satisfaction, and in Holland little more than a workmen's compensation law exists. Great Britain remains the only nation expressing fairly general satisfaction, yet parliamentary investigations and reports of royal commissions and other bodies show that a large percentage of those affected in Great Britain question strongly whether the same amount of money might not have been spent with greater benefit to the health in other ways.

A movement that has recently gained great strength in Germany and is of considerable importance in other countries would seem to indicate that where systems of sickness insurance

18. Compte rendu,[3] pp. 168, et seq. Jauniaux, A.: Cent années de mutualite en Belgique, pp. 100 et seq.
19. Official Report of Proceedings, 1927, p. 279.
20. Kreschner, M.: Zur Praxis der Begutachtung, 1931, p. 11. See comments of Sir Henry Brackenbury in Supplement to British Medical Journal, July 15, 1933, pp. 25-26, where he raises questions as to the success of the British Health Insurance in meeting its objectives. See also A. M. A. Bulletin, November 1933, pp. 120-122, where Sir Henry Brackenbury's statements are reproduced and discussed.
21. Publication 28, p. 128.

are old enough to have worked out their full results there is a widespread doubt as to whether the attempt to distribute the whole burden of medical care and relief during sickness should not be abandoned in favor of a return to individual responsibility for a portion at least of that burden.

The Swedish, Norwegian, French and Chilean systems have always required the insured to bear a portion of the burden when the service is given. In Denmark, Switzerland and Luxemburg only a part of the cost of drugs is paid by the insurance system. It is noteworthy that complaints of excessive practice and overmedication are seldom heard in these countries and that they have not shown any such alarming increase in "morbidity" as has characterized other systems.

In Germany, and also in some other countries with long experience with compulsory insurance, there is a strong movement, especially among physicians (although by no means confined to them) in favor of some sort of compulsory system of saving as a substitute for insurance as at present operated.[22]

There is considerable variation in the details of the proposals of these various writers, but all involve the principle of segregation of all or part of the contributions of the insured and of returning a certain portion at death or at the age when an old age pension is granted or else to offer a cash reward or suspension of contributions to those who have not asked the aid of the fund for a certain period. A similar plan has been vigorously urged by P. Specklin, a physician with a long prewar experience under the Germany system at Mulhouse.[23]

TABLE 4.—*Infant Mortality in Prussia*

	1913	1925	1926	1927	1928	1929
Among the wealthy	6.5	4.1	4.1	3.6	3.4	3.4
In the middle class	8.9	6.5	6.4	6.4	5.9	6.6
In the working class, excluding those occupations in which there are a large number of illegitimate children	14.1	10.4	10.1	9.7	9.4	10.8
Working class, including occupations with many illegitimate children	21.4	15.6	14.9	14.2	12.5	13.5

The fact that the actuarial basis of the English system has proved to be wholly unreliable and that no method has been found of calculating the tremendous increase in morbidity due to economic and psychologic reasons throws doubt on the question as to whether any of the existing or immediately proposed forms of sickness insurance offer any satisfactory solution of the distribution of medical care. One thing is clearly evident: the degree of satisfaction of insured and physician in practically every country depends on the extent to which medical professions have been able to defeat the schemes of lay administrators. England, France and the Scandinavian countries are the nations where professional control is most complete and where the sort of proposals that are urged by lay forces in this country as the basis of sickness insurance have had least development. They are also the ones where morbidity has shown the slowest rate of increase, where physicians and insured express the greatest satisfaction and where even the societies are in the best financial condition.

22. Hartz, G.: Neue Wege in der Sozialpolitik, 1929. Müller, Arthur: Zwangssparsystem statt Sozialversicherung, 1929. Lick, Erwin: Soziale Versicherungen und Volksgesundheit, 1929. Zeisler, August: Im Kampf gegen Vergewaltigung durch den Staat, 1931. Hartz, Gustav: Eigenthum oder Rente, 1930. Baeumer, Waldemar: Die Krankenversicherung, Jetzt ein Fluch umgestaltet ein Segen für das Volk, 1930. The intentions of the Nazi government were outlined by Hadenkamp in the Aerztliche Mitteilungen, March 11, 1933, pp. 223-225, where he says concerning this phase of the subject: "The exact form that this fundamental reform will take cannot be stated today. A certain rôle will be played by the idea of directing insurance into a compulsory savings system. As is well known, this idea has for a long time been active in the public mind and has been discussed by the medical profession. In medical circles it has been differently estimated; some have welcomed it strongly. . . . The national socialist movement has declared itself for the development of the idea of saving but has coupled this with the proposal for fundamental changes. State Secretary Dr. Krohn in an interview with the representative of a great daily paper has declared that he saw possibilities in a sound combination of insurance and savings. He thought—and that is important for us—to be sure only of the cash insurance, not of sickness insurance."

23. Presse médicale, Feb. 26 and March 6, 1929; also in British Medical Journal, January 25, 1930, supplement, pp. 25-28. See also McCleary, G. F.: National Health Insurance, 1932, pp. 157-159. For similar movement in Austria see Augustin, Gisela: Klinische Wochenschrift, Feb. 13, 1932.

Association News

MEDICAL BROADCASTS

National Broadcasting Company

The American Medical Association broadcasts on a coast-to-coast network each Monday afternoon from 4 to 4:15 Central daylight saving time (4 o'clock Eastern standard time, 3 o'clock Central standard time, 2 o'clock Mountain standard time, 1 o'clock Pacific standard time).

The next three broadcasts will be as follows:

May 14. Pursuit of Longevity, Morris Fishbein, M.D.
May 21. Disease by Air, W. W. Bauer, M.D.
May 28. The Family Medicine Chest, Morris Fishbein, M.D.

Columbia Broadcasting System

The Association broadcasts on a Western network of the Columbia Broadcasting System each Thursday afternoon on the Educational Forum from 4:30 to 4:45, Central daylight saving time. The next three broadcasts will be as follows:

May 17. Mischievous Misconceptions, W. W. Bauer, M.D.
May 24. Character of a Quack, Morris Fishbein, M.D.
May 31. Health Slogans, W. W. Bauer, M.D.

THE CLEVELAND SESSION

Radio Addresses to Be Broadcast During the Week

A simple program of a practical nature has been arranged for broadcasting during the week of the convention, over Stations WTAM, WHK and WGAR:

RADIO STATION WTAM (NATIONAL BROADCASTING COMPANY)

Talks on the following subjects will be made late in the afternoon:

Monday, June 11. Common Cold, Wilson G. Smillie, M.D. (network).
Tuesday, June 12. New Diabetics for Old, Priscilla White, M.D.
Wednesday, June 13. Your Doctor, W. L. Bierring, M.D.
Thursday, June 14. Convention Highlights, Morris Fishbein, M.D.

RADIO STATION WHK (COLUMBIA BROADCASTING SYSTEM)

Talks on the following subjects likewise will be made late in the afternoon:

Monday, June 11. Health Examinations, Wingate Johnson, M.D.
Tuesday, June 12. Family Doctor, N. B. Van Etten, M.D. (network).
Wednesday, June 13. Cancer Is Curable, Max Cutler, M.D.
Thursday, June 14. Medicine Marches Forward, Morris Fishbein, M.D. (network).

RADIO STATION WGAR

On Station WGAR the following subjects will be broadcast:

Monday, June 11. Appendicitis, John O. Bower, M.D.
Tuesday, June 12. Simple, Cheap, Happy, Thurman B. Rice, M.D.
Wednesday, June 13. Blood Building Foods, James S. McLester, M.D.
Thursday, June 14. Relieving Hay Fever and Asthma, G. W. Waldbett, M.D.

Golf Tournament for Women Physicians

Women physicians who desire to enter the annual golf tournament at the Cleveland session are requested to send their names to Dr. Harriet Doane, Pulaski, N. Y., or to Dr. Helena Ratterman, 126 East Auburn Avenue, Cincinnati, Ohio. For news of the golf tournament for men see page 1579.

Additional Annual Dinners During the Cleveland Session

The Alumni dinner of Rush Medical College of the University of Chicago will be held at the Hotel Statler, Wednesday, June 13, at 7 p. m.; $1.50 per plate. For reservations and other information please inquire of Dr. Austin A. Hayden at the Hotel Statler.

The Alpha Omega Alpha annual dinner will be held Thursday, June 14, at the Hotel Cleveland at 6:30 p. m.; $2 per plate. For reservations and other information please inquire of Dr. Josiah Moore at the Hotel Cleveland.

For other reunions and dinners during the Cleveland session, see pages 1578 and 1579 in this issue of THE JOURNAL.

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

CALIFORNIA

Stop Shipment of Parrots.—Newspapers reported, April 3, that the certification of psittacine birds for shipment had been halted by Dr. Jay D. Dunshee, Sacramento, director of public health of the state board of health, pending further investigation of reported cases of psittacosis. The order affects birds shipped both within and to points outside the state. Fourteen of the sixty-seven cases of psittacosis reported in the state since Dec. 1, 1931, have been fatal. It was stated that other states have reported 106 cases, with twenty-two fatalities.

Southern California Meeting.—The ninetieth semiannual meeting of the Southern California Medical Association was held in Santa Barbara, April 6-7, under the presidency of Dr. Henry Douglas Eaton, Los Angeles. The following physicians participated in the program:

Will L. Miles, Los Angeles, Split Skin Grafts.
Francis B. Settle, Long Beach, Phytobezoar Associated with Gastric Ulcer.
William M. Moffat, Santa Barbara, Follutein in the Treatment of Selected Cases of Headache.
Percival A. Gray Jr., Santa Barbara, Insulin in the Treatment of Food Allergy.
Samuel Hirshfeld, Los Angeles, Dysovulation.
Noel F. Shambaugh, Long Beach, Thorium Dioxide as a Diagnostic Aid.
Rexwald Brown, Santa Barbara, Collectivism in Medicine—A Movement Which Should Be Promoted.
Rea Smith, Los Angeles, A Study of Abdominal Adhesions.
Charles C. Coghlan, Los Angeles, Red Hair and Its Relation to Allergy.
Chalmer Hiram Weaver, Los Angeles, Cancer of the Cervix.

Dr. Cyrus Sturgis, professor of internal medicine, University of Michigan School of Medicine, Ann Arbor, spoke on "Treatment of Anemias" and "Observations Concerning the Etiology of Agranulocytosis."

Society News.—Dr. John D. Camp, Rochester, Minn., addressed the San Francisco County Medical Society, May 8, on "Roentgenologic Findings in Hyperparathyroidism."——A program sponsored by the San Mateo County Medical Society was presented at the Veterans' Administration Facility, Palo Alto, April 19, with Dr. Arthur L. Bloomfield, San Francisco, as speaker, on "Present Status of Focal Infection in Relation to the Practice of Medicine."——Dr. Ralph Kaysen, San Diego, discussed Boehler methods before the San Diego County Medical Society, April 10.——Dr. Russell L. Cecil, New York, addressed the San Diego Academy of Medicine, April 27, on "Modern Treatment of Rheumatoid Arthritis."——Harold F. Hawkins, D.D.S., addressed the Hollywood Academy of Medicine, April 19, on "Mineral Metabolism as Related to Medicine" and Dr. Rea Proctor McGee, "Inter-Relationship of Medicine and Dentistry."——Speakers before the Los Angeles Surgical Society, April 13, included Drs. Lucius W. Johnson and Joseph L. Schwartz, captain and lieutenant commander, respectively, U. S. Navy, on "Head Injuries" and "Practice of Medicine in American Samoa."——At a meeting of the San Francisco Pathological Society, March 29, Drs. Frederick A. Proescher and Adelbert M. Moody, among others, discussed "Forensic Methods for Examination of Blood."——Dr. Albert H. Rowe, Oakland, addressed the San Joaquin County Medical Society, April 5, on "Problems of Allergy in Medical Practice."——Dr. Charles A. Dukes, Oakland, discussed the Alameda County health insurance plan before the Solano County Medical Society, April 10.

COLORADO

Society News.—A symposium on cancer of the breast was presented before a joint meeting of the Boulder and Larimer county medical societies, April 4, by Drs. William W. Haggart, Wilfred S. Dennis and Frederick E. Diemer.——At a meeting of the Medical Society of the City and County of Denver, April 17, Reuben G. Gustavson, Ph.D., and Fred E. D'Amour, Ph.D., discussed "Recent Studies in the Human Sex Cycle" and "Recent Hormone Studies During Pregnancy," respectively. The society was addressed, April 3, by Drs. Theodore E. Beyer on "Otogenic General Sepsis"; Walter W. King, "Neoplasm of the Breast," and Alexander W. Freshman, "Breast Surgery" (motion picture).

Spring Clinics at Pueblo.—Three days were given over to the spring clinics of the Pueblo County Medical Society, April 18-20, under the auspices of the Colorado State Medical Society. The subjects treated included:

Electrosurgical Resection in Carcinoma of the Breast, Dr. William Senger.
Tonsillectomy in Modified Suspension Position, Dr. Clarence E. Earnest.
Obstetrical Practice in a Rural Community, Dr. George E. Van Der Schouw.
Puerperal Eclampsia: Cause, Prevention and Treatment, Dr. William F. Singer.
Problems in Infant Feeding, Dr. John D. Geissinger.
Treatment of Squint, Dr. Guy H. Hopkins.
Chronic Suppurative Otitis Media—Its Treatment by Radical Mastoid Operation, Dr. James J. Pattee.
Blood Dyscrasias, Dr. Frederick M. Heller.
Trichomonas Vaginalis: Its Etiologic Relationship to Leukorrhea, Dr. John B. Fayley.
Problems in Medicolegal Practice, Mr. Benjamin F. Kopetlik.

DISTRICT OF COLUMBIA

Personal.—Dr. Benjamin P. Watson, New York, gave one of the lectures in the Smith-Reed-Russell series at George Washington University School of Medicine, March 27, on "Present-Day Conceptions of Puerperal Sepsis."——*Science* reports the death, February 7, of Felix Neumann, aged 76, until recently assistant librarian at the Army Medical Library.

Health at Washington.—Telegraphic reports to the U. S. Department of Commerce from eighty-six cities with a total population of 37 million, for the week ended April 28, indicate that the highest mortality rate (18.4) appears for Washington, and for the group of cities as a whole, 12. The mortality rate for Washington for the corresponding period last year was 15.5, and for the group of cities, 11.3. The annual rate for eighty-six cities for the seventeen weeks of 1934 was 12.6 as against a rate of 12 for the corresponding period of the previous year. Caution should be used in the interpretation of these weekly figures, as they fluctuate widely. The fact that some cities are hospital centers for large areas outside the city limits or that they have a large Negro population may tend to increase the death rate.

Medical Bills in Congress.—H. R. 9395, introduced by Representative Weideman, Michigan, proposes to provide compensation for disability or death resulting from injury to employees in certain employments in the District of Columbia. The bill would authorize an injured employee to select a physician to treat his injury, the reasonable cost of such treatment to be paid by the insurer, subject to the approval of the Deputy Commissioner. The bill would further authorize the Deputy Commissioner to order a change in the physician, surgeon, hospital or other requirement, if, in his opinion, reasonable ground exists for believing that such a change is necessary to safeguard the life, health or recovery of the employee. All fees and other charges for treatment or service are to be limited "to such charges as prevail in the same community for similar treatment of injured persons of like standards of living" and are to be subject to regulation by the Deputy Commissioner.

Course in Female Endocrinology.—The George Washington University School of Medicine opened a course in female endocrinology, May 4, to continue until May 28. The following lectures comprise the course:

May 4, A Historical Review of the Female Sex Endocrinology; Physiology of the Sex Glands, Dr. Jacob Kotz, clinical professor of obstetrics and gynecology.
May 7, Chemistry of the Female Sex Hormones, Vincent De Vigneaud, Ph.D., professor of biochemistry.
May 11, Clinical Hormone Tests, Technic, Indications and Interpretations of Results, Dr. Elizabeth Parker, research associate in endocrinology.
May 14, Functional Bleeding; Rôle of the Endocrines in the Menopause, Dr. Howard F. Kane, professor of obstetrics and gynecology.
May 18, Dysmenorrhea; Etiology and Treatment; Scanty and Irregular Menses; Amenorrhea, Dr. Kotz.
May 21, Premature Termination of Pregnancy Due to Endocrine Disturbances, Dr. Kane.
May 25, The Endocrines in Obesity and the Neurotic Women with Disturbed Endocrine Function, Dr. Kotz.
May 28, Frigidity; Oversexed Women and Functional Sterility, Dr. Kotz.

ILLINOIS

Society News.—A symposium on peptic ulcer was presented before the Sangamon County Medical Society, April 5, by Drs. Charles L. Patton, Frank N. Evans, Richard F. Herndon, Thomas D. Masters, Lawrence M. Hilt and David J. Lewis, Springfield.——Speakers before the Bureau County Medical Society in Princeton, April 10, were Drs. Philip H. Kreuscher and Ernest E. Irons, both of Chicago, on backache and causes and treatment of chronic arthritis, respectively.——Dr. Meyer Solomon, Chicago, discussed nervous breakdowns before the Will-Grundy County Medical Society, April 11.——At a meeting of the Iroquois County Medical Society, April

12, Dr. Philip Rosenblum, Chicago, spoke on "Convulsions in Children."——The Fulton County Medical Society was addressed in Canton, April 18, by Dr. James P. Simonds, Chicago, on nephritis.——At a meeting of the Kane County Medical Society in Aurora, April 11, Dr. Irving F. Stein, Chicago, discussed "The Use of Obstetric Forceps."——Dr. Herbert N. Rafferty, Robinson, among others, addressed the Crawford County Medical Society, April 18, on "Multiple Fractures and Traumatic Epilepsy."——The Peoria City Medical Society was addressed, May 1, by Dr. Chauncey C. Maher, Chicago, on "Treatment of Cardiac Edema." The society was addressed, April 17, by members of the state health department: Dr. Frank J. Jirka, amebiasis; Howard J. Shaughnessy, Ph.D., the doctor and the diagnostic laboratory, and Dr. Robert H. Woodruff, the doctor and vital statistics.

Chicago

Capps Prize to Dr. Kistler.—The Institute of Medicine of Chicago has awarded the Joseph A. Capps Prize for medical research for 1933 to Dr. Gene H. Kistler, University, Ala., for his paper on "Sequences of Experimental Infarction of the Femur in Rabbits." Dr. Kistler graduated from Rush Medical College in 1931. The prize of $500 is awarded annually for meritorious medical research by a graduate of a Chicago medical school, completed within two years after graduation.

Society News.—Dr. John T. Murphy, Toledo, addressed the Chicago Roentgen Society, May 10, on "Bone Tumors."——The Chicago Tuberculosis Society was addressed, May 10, among others, by Dr. John B. O'Donoghue on "Surgery of Pulmonary Tuberculosis."——Speakers before the Chicago Pathological Society, May 14, will include Dr. Emil T. Hoverson, Kankakee, Ill., on "Sedimentation Rate of Erythrocytes: An Explanation for Normal Daily Variations."——The Chicago Academy of Criminology was addressed, May 10, by Benjamin C. Bachrach, public defender of Cook County, on "Criminal Code and Indeterminate Sentence," and Prof. Harrison Dobbs of the University of Chicago, "The State's Responsibility in the Correctional Education of Children."

INDIANA

District Meeting.—The Ninth District Medical Society will hold its annual meeting at the Country Club, Frankfort, May 17, when Mayor C. E. Crawford will give the address of welcome. Speakers will include Drs. Ralph G. Carothers, Cincinnati, on "Treatment of Compound Fractures"; Edwin N. Kime, Indianapolis, "Prognosis in Cancer," and William F. McBride, Dayton, "The Country Doctor—Forty Years of It." Dr. Charles P. Emerson, Indianapolis, will give the banquet address on "Oriental Medicine." A golf tournament will be a feature of the session.

Society News.—Dr. Maurice Joseph Barry, among others, will address the Indianapolis Medical Society, May 15, on "Heredity in Anemia." Dr. Dean Lewis, Baltimore, President, American Medical Association, will discuss "Tumors of the Breast" before the society, May 22, meeting jointly with the graduate group of the Indiana University Medical Center.——Dr. Richard B. Stout, Elkhart, spoke before the Northeastern Indiana Academy of Medicine at Kendallville, April 26, on "Spinal Anesthesia—Volume Control Technic."——Dr. Julius R. Yung, Terre Haute, discussed exophthalmic goiter before the Gibson County Medical Society in Princeton, April 9.——At a meeting of the LaPorte County Medical Society in Michigan City, April 12, Dr. Victor D. Lespinasse, Chicago, spoke on "The Childless Couple—Cause and Cure."——Dr. Percy E. McCown, Indianapolis, addressed the Clinton County Medical Society in Frankfort, April 5, on "Transurethral Removal of Bladder Neck Obstructions."——Dr. Harold Dale Pyle, South Bend, addressed the St. Joseph County Medical Society, April 3, on "Nutritional Diseases of Infants and Children."

IOWA

Society News.—The Linn County Medical Society was addressed, May 3, by Dr. Fred L. Adair, Chicago, on "Maternal Mortality and Morbidity."——Speakers before the Des Moines Academy of Medicine and Polk County Medical Society, April 24, included Drs. Helen Johnston and Edward J. Harnagel on trichomonas vaginalis vaginitis and jaundice, respectively.

Annual Renewal Fees Due Before June 1.—All licenses to practice medicine and surgery in Iowa expire annually on June 30. To renew such a license a licentiate must make a written application to the state department of health before June 1, enclosing the renewal fee of $1. If a license expires by reason of the licentiate's failure to renew it, it can be reinstated without reexamination only on the recommendation of the board of health and the payment of the overdue fees.

Annual Birthday Banquet.—In celebration of his sixty-seventh birthday, Dr. William A. Rohlf, Waverly, recently held his annual birthday dinner and clinic. More than 100 professional friends of Dr. Rohlf attended. With Dr. Jay F. Auner, Des Moines, as toastmaster, speakers included Drs. Charles B. Taylor, president of the state medical society; Robert L. Parker, Des Moines, secretary of the state society; Leonard A. West, Des Moines, and Charles H. Graening, Waverly. A huge birthday cake bearing sixty-seven candles was presented to Dr. Rohlf by Dr. and Mrs. John McDannell, Nashua. A surgical clinic was held in the morning and a medical clinic in the afternoon. Speakers included Drs. Harold C. Habein and Virgil S. Counseller, Rochester, Minn., on internal medicine; Howard L. Beye, Iowa City, surgical conditions of the chest, and Fred M. Smith, Iowa City, thyroid disorders. About 142 physicians attended the clinics. Dr. Rohlf, a past president of the Iowa State Medical Society, has been holding this birthday clinic celebration for several years.

KENTUCKY

Health Report for 1933.—Preliminary statistics issued by the state department of health show that the death rate in Kentucky for 1933 was 10.7 per thousand of population, the same as the preliminary rate in 1932, later raised to 11.2. Mortality among infants less than 1 year old fell from 68.5 in 1932 to 59.5 in 1933. Pneumonia, whooping cough, scarlet fever, measles, influenza and the diarrheas showed decreases, but diphtheria and typhoid increased slightly. The tuberculosis rate was the same as the preceding year, 85.8.

Society News.—Dr. Chauncey W. Dowden, Louisville, addressed the Franklin County Medical Society, Frankfort, March 8, on secondary anemia.——Drs. Rettig A. Griswold and Robertson O. Joplin presented a paper on "Fracture of the Lower Extremity" before the Jefferson County Medical Society, Louisville, April 2.——Drs. Seale Harris, Birmingham, and Seale Harris Jr., Nashville, Tenn., addressed the Christian County Medical Society, Hopkinsville, March 20, on "Hyperinsulinism and Its Relation to Epilepsy and Epileptiform Convulsions" and "Treatment of Syphilis," respectively.

LOUISIANA

Dr. Jackson Lectures.—Dr. Chevalier Jackson, professor of bronchoscopy and esophagoscopy, Temple University School of Medicine, Philadelphia, gave a series of lectures at Louisiana State University Medical Center, New Orleans, April 16-19. His subjects included "Diagnosis of Foreign Bodies in the Air and Food Passages," with motion picture demonstration of the mechanism of valvular obstruction; "Diseases of the Esophagus," with demonstration of esophagoscopy for diagnosis, and "Bronchoscopy as an Aid in the Diagnosis and Treatment of Pulmonary Diseases." Dr. Jackson is visiting professor at the medical center.

MAINE

State Medical Meeting at Bangor, May 27-29.—The eighty-second annual meeting of the Maine Medical Association will be held at Bangor, May 27-29, with headquarters at the Bangor House, and under the presidency of Dr. Warren E. Kershner, Bath. Dr. Dean Lewis, Baltimore, President of the American Medical Association, will speak, Tuesday, on "Differential Diagnosis of Breast Tumors." Reviewing the year's progress in medicine, speakers will be Drs. Eugene H. Drake, Portland, and John O. Piper, Waterville; in ophthalmology, Erastus E. Holt Jr., Sylvester J. Beach, Portland, and Howard F. Hill, Waterville; in surgery, Edward H. Risley, Waterville, and Frank H. Jackson, Houlton; otolaryngology, Henry P. Johnson and George O. Cummings, Portland, and pediatrics, Thomas A. Foster, Portland. Physicians on the scientific program will include:

Magnus F. Ridlon, Bangor, Ectopic Pregnancy.
Alfred Mitchell Jr., Portland, Strictures of the Urethra.
Harold D. Ross, Sanford, Abdominal Complications in Obstetrics.
Oscar R. Johnson, Portland, Skin Manifestations in General Disease.
Frederick T. Hill, Waterville, Acute Throat Conditions.
Sullivan L. Andrews, Lewiston, Significance of Eye Symptoms in Head Injuries.
George E. Young, Skowhegan, Thoracic Surgery: Results of Collapse Therapy in State Sanatoriums.
William A. Ellingwood, Rockland, Focal Infections in Ear, Nose and Throat and Their Relation to Systemic Disease.
Raymond V. N. Bliss, Bluehill, Diseases of the Arteries.

At the annual banquet, Tuesday evening, addresses will be made by Dr. Kershner and Dr. Lewis.

MARYLAND

Tuberculosis Clinics for Negroes.—As a special feature for the observance of National Negro Health Week, the Maryland Tuberculosis Association conducted four special tuberculosis clinics for Negroes in the counties of the state:

April 3, Fairmont Heights, Prince George's County.
April 5, Prince Frederick, Calvert County.
April 6, Bowie, Prince George's County.
April 6, St. Michaels, Talbot County.

Dr. Warthen Named Assistant Health Commissioner.—Dr. William H. F. Warthen, for ten years director of the bureau of child welfare, has been appointed assistant commissioner of health of the Baltimore City Health Department, succeeding the late Dr. John Frederick Hempel. Dr. Humphrey Warren Buckler has been acting temporarily in this position pending a permanent appointment. Dr. Warthen, 37 years old, is a graduate of Johns Hopkins University School of Medicine.

Medical Advisory Board.—Appointment of a medical advisory board for the Baltimore City Hospitals, with Dr. George Walker as chairman, was announced, April 6. Other members of the board include Drs. Alan M. Chesney, dean, Johns Hopkins University School of Medicine; James M. H. Rowland, dean, University of Maryland School of Medicine; Huntington Williams, health commissioner; Thomas R. Boggs, Arthur M. Shipley and Charles C. Habliston, and Mr. Parker J. McMillin, superintendent of the city hospitals.

MASSACHUSETTS

Precipitation Test to Be Used by State Department.—The Massachusetts Department of Public Health, as the result of several years of comparative study of various types of serologic tests for syphilis and in view of the majority opinion of both local syphilologists and serologists in many of the states and laboratories, is now using a precipitation test for official routine purposes. Use of the new test was begun, April 2. According to Dr. Henry D. Chadwick, commissioner of public health, the precipitation test was developed by Dr. William A. Hinton, chief of the state serologic laboratory.

Society News.—Speakers before the New England Pediatric Society in Boston, March 23, included Drs. James L. Gamble and Stewart H. Clifford on "Present Knowledge of the Food Substances" and "Factors Influencing the Viability of Premature Infants," respectively.——Drs. J. Herbert Waite and William P. Beetham presented a paper on "Ocular Complications in Diabetes" before the New England Ophthalmological Society, April 17.——At a meeting of the New England Roentgen Ray Society in Boston, April 20, speakers included Drs. Harry F. Friedman and Abram Louis Hermanson on "Protected Irradiation in Carcinoma of the Larynx" and "Roentgenologic Exploration of the Biliary Ducts with Iodized Oil," respectively.——Dr. Edwin A. Locke discussed "Hypertension, Its Cause and Treatment" before the Malden Medical Society in Malden, April 17.——Dr. Albert A. Epstein, New York, spoke before the William Harvey Society in Boston, April 13, on "Diseases of the Kidney in General Practice."

MICHIGAN

Dr. Campbell Named Mayor.—Dr. James B. Campbell took office as mayor of Big Rapids, April 9; he is the fourth physician to hold the office in the history of the city. He is president of the Mecosta County Medical Society and, for the past four years, has been city commissioner. Dr. Campbell has been practicing in Mecosta County since 1900.

Dinner to Dr. Chene.—The staff of Providence Hospital, Detroit, gave a dinner at the Detroit Athletic Club, May 3, in honor of Dr. George Charles Chene, who has been connected with the institution for twenty years and secretary of the staff for the last fifteen years. He has held various teaching positions in the departments of gynecology and roentgenology at Detroit College of Medicine and Surgery since 1908.

MISSOURI

Society News.—The St. Louis County Medical Society is now publishing a bimonthly bulletin. The initial copy was dated February 28. Speakers before the society, April 11, included Drs. Franz J. Arzt on "Syphilis in Pregnancy" and John Grey Jones, "Management of Posterior Presentation."——Dr. Ernest Kip Robinson, Kansas City, addressed the Lafayette County Medical Society, March 24, on "Newer Methods in Cancer Treatment."——Dr. Harvey J. Howard presented the "Adventures of an American Physician in China" before the St. Louis Medical Society, April 10. Members of the St. Louis Trudeau Club presented a symposium on the prognosis of pulmonary tuberculosis before the society, April 3.——Dr. Sidney I. Schwab spoke before the St. Louis Neuropsychiatric Society, April 23, on "The Utilization of Freudian Concepts in Neurology and Psychiatry."——Dr. Otto Jason Dixon, Kansas City, addressed the Golden Belt Medical Society at Junction, April 5, on "Advantage of Conservative Treatment in Acute Mastoid Disease," and the Panhandle District Medical Society at Amarillo, Texas, April 10, on "A New Method for Surgical Treatment of Sigmoid Sinus Thrombosis with the Use of Viable Muscle Implant."

NEW YORK

Society News.—Dr. Edward C. Reifenstein, Syracuse, addressed the Utica Academy of Medicine, recently, on cardiac pain.——Drs. John P. Peters, New Haven, Conn., and Neil C. Stevens, Glen Cove, addressed the Medical Society of the County of Nassau, Mineola, March 27, on "Nature and Treatment of Diabetes" and "Auscultation of the Abdomen as a Method of Diagnosis," respectively.——Dr. Frederick S. Wetherell, Syracuse, addressed the Broome County Medical Society, Binghamton, March 6, on "Sympathetic Nerve Surgery—A Discussion of Its Progress and Rationale."——Dr. Emanuel D. Friedman, New York, addressed the Chemung County Medical Society, Hornell, and the Steuben County Medical Society, Elmira, April 19, on epidemic encephalitis.

New York City

Personal.—Michael Heidelberger, Ph.D., associate professor of biologic chemistry at Columbia University and research chemist to Presbyterian Hospital, has recently been awarded a grant by the Guggenheim Foundation for research on the molecular weight of thyroglobulin at Uppsala University, Sweden.——Donald D. Van Slyke, Sc.D., research chemist to the hospital of the Rockefeller Institute for Medical Research, was guest of honor at a dinner, March 29, in honor of his twentieth anniversary in that position.

Society News.—At a meeting of the Medical Society of the County of Queens, April 24, Dr. Thomas T. Mackie discussed amebiasis, and Dr. Charles H. Goodrich discussed medical economics. Dr. Thomas Drysdale Buchanan delivered a Friday afternoon lecture before the society, April 6, on recent advances in anesthesia.——Dr. Fred Wise will address the American Stomatological Association, May 15, on "Buccal and Labial Lesions of Interest to Dentist and General Practioner."——Dr. Carroll Fox, medical director, U. S. Quarantine Station, Rosebank, L. I., addressed the Public Health Officers Association, April 18, at the headquarters of the city health department, on "Quarantinable Maritime Diseases and Their Method of Spread."——At the meeting of the International and Spanish-Speaking Association of Physicians, Dentists and Pharmacists, March 16, a symposium on "Birth and Sex Abnormalities" was presented by Drs. Irving W. Potter, Buffalo, Samuel R. Meaker, Boston, James A. Harrar and Ira S. Wile. A testimonial dinner was given to Dr. Jacob M. Gershberg, president and founder of the society, April 25, at the Hotel Astor, by the board of directors.

District Health Administration.—Plans are going forward for the establishment of health districts to carry out localized health service, in accordance with the results of experimentation that has been carried on for several years in the Bellevue-Yorkville district. Three years ago the Central Harlem Health Center was established with its activities officially related to the central health department and with the cooperation of various official and voluntary agencies. Under the new administration, funds have now become available for the continuation of the plan under the direction of the department of health. A new bureau of district health administration has been created with Dr. Margaret Shepard Witter Barnard as temporary director, pending civil service examination. Central Harlem has been made the first official district and Dr. Arthur I. Blau, district health officer. Other districts will be chosen shortly. The Coordinating Council of the Five County Medical Societies in a report issued in 1931 approved the establishment of these centers and has taken an active part in the preliminary planning. A technical advisory committee to the commissioner of health and the bureau has been appointed as follows: Drs. James Alexander Miller, chairman; George Baehr, Hugh Chaplin, Charles Gordon Heyd and Edward L. Keyes; Mr. Bailey B. Burritt, Mr. Homer Folks, William F. Walker, Dr.P.H., and Katherine Tucker, R.N.

Elfes in Jail—May Be Deported.—Carl R. Elfes, who has practiced medicine without a license in various states and under various names, was sentenced to a year in New York County Penitentiary and was also fined $500 or in default of

payment of the fine to serve 100 days in addition, April 24, after he was found to be practicing without legal authorization as physician to Hart's Island Prison, this time under the name Max R. Schneller. Schneller received a temporary appointment as psychiatrist to the prison in March, when the department of correction was making drastic changes in its medical staff. After being pressed for his license for some time, Schneller applied to the state board of medical examiners in the name of Dr. Max Schneider, a reputable physician, and as a result of the subsequent investigation was relieved from duty, April 12. Immediately after this he attempted suicide by taking an overdose of a sedative drug. When arraigned in court two days later he pleaded guilty, fainting twice during the hearing. He again collapsed in court when he was sentenced ten days later. The checkered career of Schneller-Elfes has been reviewed in THE JOURNAL (Sept. 17, 1927; May 3, 1930, p. 1419, and July 11, 1931, p. 111), and the *Federation Bulletin*, published by the Federation of State Medical Boards of the United States, printed in January 1928 a long account of his activities up to that time. Information from the probation department of the New York Court of Special Sessions indicates that an effort will be made to deport him. He claims to be a native of Germany and to have been adopted by a Baron Arthur von Schneller. It was reported that he was employed at Hart's Island at a salary of $1,450 a year and maintenance.

OHIO

University News.—Beginning next September, the school of nursing of Western Reserve University will become a graduate professional school. Applicants for admission must have completed a course leading to the degree of bachelor of arts, science or philosophy. The course may be completed in thirty-three months.——Rev. John F. Berry, formerly registrar of Western Reserve University School of Dentistry, Cleveland, has been appointed registrar of the school of medicine at the university.

Society News.—Dr. Marion A. Blankenhorn, Cleveland, addressed the Toledo Academy of Medicine, April 27, on "Deficiency Diseases of Adults." During the morning of that day medical and surgical clinics were held at Toledo Hospital by the staff and in the afternoon Dr. Blankenhorn conducted a clinic.——Dr. Karl D. Figley, Toledo, addressed the Allen County Medical Society, Lima, March 20, on allergy.——Drs. Elmer I. McKesson, Toledo, and Irwin A. Bottenhorn, Columbus, addressed the Marion County Academy of Medicine, Marion, April 3, on "Anesthesia in Medicine and Dentistry" and "Pulp and Pulp Canal Infection," respectively.——The Doctors' Symphony Orchestra of Akron gave a concert before the Stark County Medical Society, Canton, April 12. Dr. Alexander S. McCormick is director of the orchestra.——Speakers before the Columbus Academy of Medicine, March 12, were Drs. Raymond A. Ramsey, on goiter; Francis W. Gosnell, metabolism and hypothyroidism, and John E. Briggs, inflammation and malignancy.——Dr. John W. Carmack, Indianapolis, addressed the Montgomery County Medical Society, Dayton, April 6, on "Cooperation of the General Physician and the Otolaryngologist in the Treatment of Nasal Sinus Infection."

OKLAHOMA

Society News.—Drs. Harry Wilkins and Don H. O'Donoghue, Oklahoma City, addressed the Comanche County Medical Society, Lawton, March 8, on "Neurosurgical Conditions in Children" and "Injuries About the Knee Joint," respectively.——At a meeting of the Southwestern Oklahoma Medical Association, Clinton, March 20, speakers were Drs. Charles W. Stevenson and Charles R. Hartsook, Wichita Falls, Texas, on "Tumors of the Chest" and "Relation of Ophthalmology and Otolaryngology to General Medicine," respectively; and Drs. Walter W. Wells and Willis K. West, Oklahoma City, on "Care of the Breast in Obstetrics" and "Deformities in Children Due to Fractures," respectively.

OREGON

New State Board Officers.—At a meeting of the Oregon State Board of Medical Examiners, April 5, the following officers were elected: Drs. Elza D. Johnson, Klamath Falls, president; Joseph F. Wood, Portland, secretary, and Charles C. Newcastle, Portland, treasurer.

Jones Lectures.—Dr. John F. Fulton, Sterling professor of physiology, Yale University School of Medicine, New Haven, Conn., gave the tenth annual N. W. Jones Lectures at the University of Oregon Medical School, Portland, recently. His subjects were: "Autonomic Representation in the Cerebral Cortex" and "The Functions of the Frontal Lobes."

PENNSYLVANIA

Public Meeting on Cancer.—The Cambria County Medical Society presented a program on cancer for the public, May 10, in Johnstown, as part of its campaign for early diagnosis and treatment. Speakers were Drs. Samuel J. Waterworth, Clearfield; Bernard P. Widmann, Philadelphia, and Joseph C. Bloodgood, Baltimore. Members of the Somerset County Medical Society were guests.

Philadelphia

Coroner May Serve Writ on Sheriff.—When the sheriff of Philadelphia was made codefendant in a lawsuit recently, the question arose as to who could legally serve a writ on him. After a search of old laws it was discovered that the city coroner was empowered to serve such a writ, as under old English law he was the highest officer in the county. It was the first time such a case had occurred in the memory of city officials, it was said.

Society News.—The Philadelphia Heart Association held its annual meeting, April 11, with Drs. Charles H. Miner, Wilkes-Barre, and William D. Stroud as speakers. Dr. Edward B. Krumbhaar was reelected president.——Drs. Herrmann L. Blumgart, Boston, and Homer M. Swift, New York, addressed the College of Physicians of Philadelphia, May 2, on "Total Ablation of the Normal Thyroid in the Treatment of Patients with Chronic Heart Disease" and "Current Concepts of the Nature of Rheumatic Fever," respectively.——The Society of the Medical Alumni of the University of Pennsylvania will hold its annual reunion, May 19. Dr. Barton C. Hirst is president and Dr. Alex Heron Davison, secretary.

The Da Costa Oration and Strittmatter Award.—Dr. George W. Crile, Cleveland, delivered the fourth annual Da Costa Oration of the Philadelphia County Medical Society, April 18, on the endocrine glands. At the meeting the eleventh annual Strittmatter Award under the auspices of the society was presented to Dr. Philip F. Williams for his services in the field of maternal mortality. Dr. Williams, a graduate of the University of Pennsylvania School of Medicine (1909), is assistant professor of obstetrics at his alma mater and in the Graduate School of Medicine of the university. In 1930 he was chairman of a committee which made an exhaustive study of maternal mortality. The award, established by Dr. Isidor P. Strittmatter in 1923, is a gold medal given to a physician who has rendered meritorious service or made a valuable contribution to the healing art or to one of the fundamental sciences of medicine.

TENNESSEE

State Medical Election.—Dr. John O. Manier, Nashville, was elected president of the Tennessee State Medical Association at the annual meeting in Chattanooga, in April, succeeding Dr. Hiram B. Everett, Memphis. Sectional vice presidents were elected as follows: Drs. William B. Campbell, Cleveland, East Tennessee; James K. P. Blackburn, Pulaski, Middle Tennessee, and Grailey H. Berryhill, Jackson, West Tennessee. Dr. Harrison H. Shoulders, Nashville, was reelected secretary and editor of the state medical journal. Next year's meeting will be held in Nashville.

Society News.—Drs. John E. Gordon, Detroit, and Walker L. Rucks, Memphis, addressed the Gibson County Medical Society, Trenton, March 26, on "Management of Infectious Diseases" and "Vomiting in Infancy and Childhood," respectively.——Dr. Henry A. Callaway, Maryville, addressed the Blount County Medical Society, May 3, on "Calcium Deficiency in Pregnancy."——Dr. Thurman D. Kitchin, Wake Forest, N. C., addressed the Sullivan-Johnson Counties Medical Society, Bristol, April 4, on "Relation of Physiology to Medicine."——Dr. William C. Chaney, Memphis, presented a paper on heart disease before the Obion County Medical Society, Union City, March 29.——Drs. George R. Livermore and James W. Bodley, Memphis, addressed the Fayette and Hardeman county medical societies at the Bolivar State Hospital, April 27, on "Urologic Problems of Interest to the General Practitioner" and "Infections of the Hand," respectively.——Dr. Katharine Dodd addressed the Nashville Academy of Medicine, May 1, on "Guanidine as a Complicating Factor in Certain Diseases of Childhood."

TEXAS

Society News.—The Harris County Medical Society entertained its members who are more than 70 years old at a dinner at the Houston Club, March 14. Dr. Martin Lee Graves made the address of the evening, on contributions of men of mature years.——Drs. Jerrell Bennett and Roy L. Grogan, Fort Worth,

among others, addressed the Tarrant County Medical Society, Fort Worth, March 7, on placenta praevia.——The semiannual meeting of the Northwest Texas District Medical Society was held in Wichita Falls, March 13; among other speakers were Drs. Thomas P. Frizzell, Knox City, on amebiasis; Robert E. Forrester, Moran, industrial examination; George R. Enloe, Fort Worth, acute infection of the hand, and Jackson Stewart Cooper, Abilene.——Drs. Elliott M. Mendenhall and Alfred I. Folsom, Dallas, will address the Dallas County Medical Society, May 24, on "Phrenicectomy in the Treatment of Tuberculosis" and "Analysis of 300 Prostatic Resections," respectively.——Dr. Edward H. Cary, Dallas, among others, addressed a public meeting sponsored by the Texas Hospital Association at its annual session in Temple, in March, on "The Hospital as the People's Friend."——A symposium on cancer of the cervix and uterus was presented before the El Paso County Medical Society, El Paso, March 12, by Drs. James Vance, John W. Cathcart and Willis W. Waite.

WASHINGTON

Society News.—Dr. Charles C. Tiffin, Seattle, addressed the Chelan County Medical Society, Wenatchee, March 14, on "Technic of Thyroidectomy."——Dr. Herbert E. Coe, Seattle, gave an address on "Pyloric Stenosis and Intussusception" before the Kitsap County Medical Society, Bremerton, March 13.——Drs. Roger S. Anderson and Albert J. Bowles, Seattle, addressed the Walla Walla Valley Medical Society, Walla Walla, March 8, on "Treatment of Fractures of the Head of the Femur and Tibia" and "Hyperparathyroidism," respectively.——Drs. Richard W. Perry and Souren H. Tashjian, Seattle, addressed the King County Medical Society, April 2, on "Matters of Interest to the General Practitioner Concerning Farsightedness, Nearsightedness and Squint" and "Treatment of Infections by the Mobilizations of Histiocytes," respectively.——The North Pacific Society of Internal Medicine held its biennial meeting in Seattle, March 17. Among speakers were Drs. John M. Blackford and James M. Bowers, Seattle, on "Follow-Up Study of Arterial Hypertension" and "Treatment of Delayed Pneumonic Resolution with Irradiation," respectively.

WEST VIRGINIA

Society News.—Dr. Robert K. Buford, Charleston, addressed the Fayette County Medical Society, Oak Hill, March 13, on borderline hyperthyroidism.——Dr. Roy Benson Miller, Parkersburg, president of the West Virginia State Medical Association, addressed the Tyler-Wetzel Counties Medical Society, March 13, on medical economics.——Drs. Harlow R. Connell, Bluefield, and John I. Markell, Princeton, presented papers on appendicitis before the Mercer County Medical Society, Princeton, March 15.——Drs. Edward T. W. Hall and Aubrey F. Lawson, Weston, addressed the Lewis County Medical Society at the Weston State Hospital in February, on "Injection Treatment of Varicose Veins" and "Traumatic Rupture of the Small Intestine Without External Signs," respectively.

State Medical Meeting in Huntington.—The sixty-seventh annual meeting of the West Virginia State Medical Association will be held in Huntington, May 14-16, with headquarters at the Pritchard Hotel and under the presidency of Dr. Roy Benson Miller, Parkersburg. Section meetings will be held Monday afternoon, May 14, and general scientific assemblies the next two days. The West Virginia Heart Association will meet Monday morning. Guest speakers will include:

Dr. Alfred Friedlander, Cincinnati, Studies in Oscillometry.
Dr. Paul D. White, Boston, Evolution of Our Knowledge of Heart Disease.
Dr. Albert E. Russell, U. S. Public Health Service, Silicosis and Other Pulmonary Conditions Resulting from Inhalation of Dust.
Dr. Eli J. Browder, Brooklyn, Traumatic Lesions of the Spinal Cord and Their Treatment.
Dr. Merrick F. McCarthy, Cincinnati, Surgery of the Lateral Sinus and Internal Jugular Vein.
Drs. William L. Aycock and Charles F. McKhann Jr., Boston, Symposium on Poliomyelitis.
Dr. William B. Morrison, Columbus, Ohio, Treatment of Benign and Malignant Lesions of the Stomach and Duodenum.
Dr. Luther C. Peter, Philadelphia, The Problem of the Cross-Eyed Child.
Dr. Russell L. Haden, Cleveland, Chronic Arthritis.
Dr. Olin West, Chicago, Secretary, American Medical Association, Medical Service: A Professional Service.

The annual oration on surgery will be given by Dr. James R. Bloss, Huntington, on "Obstetric Application of Surgical Progress"; the oration on medicine by Dr. George R. Maxwell, Morgantown, on "Coronary Disease." Entertainment includes a golf tournament at the Guyan Country Club to be played each day, a smoker Monday evening and a dinner dance Wednesday evening.

GENERAL

Medical Bills in Congress.—*Bills Introduced:* S. 3510, introduced by Senator Couzens, Michigan, would authorize the withdrawal of alcohol tax-free "for the use of any clinic operated for charity and not for profit, including use in the compounding of bona fide medicines for treatment outside of such clinics of patients thereof, but not for sale." H. R. 9405, introduced (by request) by Representative Knutson, Minnesota, proposes to revise the laws and regulations relating to pensions and other allowances for veterans and their dependents.

Academy of Pediatrics.—The fourth annual meeting of the American Academy of Pediatrics will be held in Cleveland, June 11-12. Monday morning and Tuesday afternoon will be devoted to round table discussions led by Drs. Thomas B. Cooley, Detroit; Herbert E. Coe, Seattle; Isaac A. Abt, Chicago; Borden S. Veeder and Hugh McCulloch, St. Louis; Arthur H. Parmelee, Oak Park, Ill.; John A. Toomey, Cleveland, and Béla Schick, New York. At an afternoon session Monday Dr. Arvid Wallgren, Gothenburg, Sweden, will give an address and Drs. Frederick F. Tisdall, Toronto, Ont., and Roy G. Hoskins, Boston, will speak on "Dental Caries" and "Ductless Glands," respectively.

Control of Noise.—Technical advances in methods of controlling noise will eventually result in voluntary control of a large part of urban noise, but suitable noise abatement ordinances are essential to achieve results in the near future, in the opinion of a committee of the American Public Health Association recently made public. The committee believed that municipal health officials should assume responsibility of the enforcement of such ordinances, since the health aspect is the chief factor in noise abatement. It should be handled by a noise abatement commission to coordinate the activities of the various municipal departments concerned and to arouse public interest in noise abatement campaigns, the committee recommended, closing with the suggestion that the study be continued until noise abatement becomes sufficiently standardized to permit a comprehensive final report.

Orthopedic Surgeons' Meeting.—The American Orthopedic Association will hold its annual meeting in Rochester, Minn., June 6-9, under the presidency of Dr. Melvin S. Henderson, Rochester. The first day will be devoted to consideration of "Open Treatment of Congenital Dislocation of the Hip." Mr. W. Rowley Bristow, London, as the guest of the association, will deliver an address the second day on "Internal Derangements of the Knee." Other speakers include:

Dr. William E. Gallie, Toronto, Ont., Tendon Fixation in Infantile Paralysis—Late Results.
Dr. Willis C. Campbell, Memphis, Tenn., Analysis of Living Cases of Bone Sarcoma After Five Year Period.
Dr. Philip D. Wilson, Boston, Treatment and End Results of Adolescent Epiphyseolysis of the Upper End of the Femur.
Dr. Hugh T. Jones, Los Angeles, Treatment of Acute Purulent Arthritis by Joint Washing.

Saturday morning, the third day, will be devoted to presentation of numerous short communications.

Society for Study of Rheumatic Diseases.—The American Association for the Study and Control of Rheumatic Diseases will hold its annual meeting in Cleveland at the Hotel Cleveland, June 11, 9 a. m., when the following program will be presented:

Dr. Arthur Steindler, Iowa City, Focal Infection in Arthritis.
Dr. Charles W. Wainwright, Baltimore, Arthritis and Streptococcus Vaccine Based on Skin Sensitivity.
Dr. Frank J. Sladen, Detroit, Three Years' Concentrated Work.
Dr. Frank R. Ober and Dr. William T. Green, Boston, Arthritis in Children.
Dr. William Paul Holbrook, Tucson, Ariz., Variations in Management During the Different Phases of Atrophic Arthritis.
C. W. Scull, Ph.D., and Dr. Ralph Pemberton, Philadelphia, The Influence of Dietetic and Other Factors on the Reduction of Swelling of Tissues in Arthritis.
Dr. Joseph Kovacs, New York, The Peripheral Blood Circulation in Chronic Arthritis and the Influence of Vasodilators.
Dr. John G. Kuhns and Harold L. Weatherford, Ph.D., Boston, The Rôle of Reticulo-Endothelial System in the Deposition of Colloidal Dyes and Particulate Matter in Articular Cavities.

To be read if time permits:

Dr. L. Maxwell Lockie and Roger S. Hubbard, Ph.D., Buffalo, Studies on Metabolism of a Case of Gout.
Dr. Edward F. Hartung, New York, Calcium and Cholesterol Metabolism in Arthritis.
Dr. G. Douglas L. Taylor, Dr. Albert B. Ferguson and Dr. Haig H. Kasabach, New York, A Study of Roentgenologic Findings in Various Forms of Chronic Arthritis.

Psittacosis Control.—The development of measures to control psittacosis in the United States was outlined in *Public Health Reports*, April 6, in a report prepared for presentation to the permanent committee of the International Office of Public Hygiene in Paris this month. In 1932 there were

seventy-six cases with seven deaths and in 1933 fifteen cases with four deaths. Up to March 4 of this year, only two cases with one death had been reported, but since the report was written an outbreak has been reported from Pittsburgh in which ten deaths occurred. All reported cases were traceable to birds bred in California, according to the report. Importation of parrots into the United States had been stopped by an embargo in January 1930, which was amended in 1932 to include all psittacine birds. Early in 1932 California health authorities placed an embargo on importation of birds into the state and began an epidemiologic study, which showed that the disease had become endemic in California aviaries. Eleven hundred and forty aviaries with about 100,000 parrakeets were inspected and registered. Efforts of state authorities to regulate breeding and marketing aroused such opposition that the federal government added a provision to interstate quarantine regulations prohibiting transportation of birds of the parrot family unless shipments were accompanied by a certificate of state health authorities. Strenuous efforts were also made by the California authorities to control spread of psittacosis within the state, but it was found that certificates were being altered and sickly birds were being shipped out of the state. In December 1933 the U. S. Interstate Quarantine Regulations were again amended to require that no birds of the psittacine family could be shipped in interstate commerce unless such birds were at least 8 months old (it had been determined that young birds are more susceptible to the infection) and unless they were accompanied by a certificate signed by the state health officer and granted after inspection and such laboratory tests as are deemed necessary. A new type of certificate was recently adopted describing in detail the shipment for which it is issued. It is issued in quadruplicate, one copy being sent to the health officer at the point of destination. Thus he is advised of the arrival of birds and may refuse admission to them if it is deemed advisable. Copies of this certificate are filed also with the state health office, the common carrier and the issuing health office.

FOREIGN

Chinese Journal Honors Professor Fülleborn.—The *Chinese Medical Journal* dedicated a special parasitology number to the late Prof. Friedrich Fülleborn, director of the Institute for Tropical Diseases, Hamburg, Germany, an authority on medical parasitology. The special number combined the issues for November and December 1933 and contained 400 pages of original articles. Professor Fülleborn, who died Sept. 9, 1933, became interested in tropical medicine as a medical officer in the German Colonial Army in German East Africa in 1896. In 1901 he became a member of the staff of the Hamburg institute for tropical medicine and in this capacity visited many parts of the world for scientific investigation, concentrating in later years on helminthology. He became director of the institute in 1930.

Society News.—The Society for the Study of Inebriety celebrated its fiftieth anniversary, April 10, with a special meeting at which Sir Humphry Rolleston delivered an address on the history of the society.——The fourth International Convention for Life-Saving Service and for First Aid in Accidents will be held in Copenhagen, June 11-16.——The sixth congress of the International Society for Logopedics and Phoniatrics (therapeutics of speech and voice) will be held in Budapest, September 5-7.——An International Congress for Endocrinology will be held in Marienbad, Czechoslovakia, May 24-26, under the chairmanship of Prof. Julius Bauer, Vienna. Information may be obtained from Professor Bauer, Mariannengasse 15, Vienna, concerning scientific matters and from the Balneological Institute, Marienbad, on administrative and technical matters.

Ophthalmologic Congress in India.—The annual conference of the All India Ophthalmological Society was held at the new All India Institute of Hygiene, Calcutta, Dec. 19-21, 1933. Clinical demonstrations were presented in the institute and in the Carmichael Medical College. Among speakers were Lieut.-Col. Ernest William O'G. Kirwan, on epidemic superficial punctate keratitis; Dr. Susil K. Mukerjee, Calcutta, on glaucoma as a result of epidemic dropsy; Lieut.-Col. R. E. Wright, Madras, on Von Hippel-Lindau's disease; Lieut.-Col. J. N. Duggan, Bombay, treatment of external eye diseases with ultraviolet rays and Dr. Victor C. Rambo, Mungeli, the place of tarsectomy and grafting of mucous membrane in surgery of the lid and conjunctiva. The Association for the Prevention of Blindness in Bengal furnished an exhibit of slides and motion pictures illustrating care of the eyes and need for preventive work. Colonel Duggan was elected president. The 1935 meeting will be held in Madras.

The World Typhus Situation.—A review of the occurrence of typhus throughout the world during 1932 and 1933, assembled by the Health Section of the League of Nations in *Epidemiological Reports*, showed serious outbreaks in Egypt, both the Asiatic and European territories of the Soviet Union, Syria and Chile. After a decline to less than 300 cases a year the number of cases reported in Egypt rose to 3,236 in 1932 and 7,476 in 1933. The disease appeared for the first time in Uganda in June 1932 and persisted through 1933. Endemic typhus showed a marked increase in the United States, though the increase is partly due to improvement in diagnosis. In South America the disease spread rapidly in Bolivia, Peru and especially Chile during the two years. A severe epidemic occurred in March and April 1932 in Syria among the seminomadic tribe of about 2,000 members camped along the Euphrates River; there were more than 400 cases, with 300 deaths. The most important foci in Asia were in the Soviet Union, where after a period of low incidence (less than 2,000 cases in 1928 and the two following years) 27,188 cases occurred in 1932. The number was considerably less in 1933, the report stated. The course in the European part of the union was parallel to that of the eastern region. A few cases were reported in the Irish Free State, Spain and Portugal.

Government Services

Physicians Wanted for Civilian Conservation Corps

The War Department announces that there is a shortage of qualified physicians of the Medical Reserve Corps to meet the needs of the medical service for the Civilian Conservation Corps. This shortage will be aggravated when a new group of approximately 300,000 men will be enrolled for the summer camps, about 200 men to each camp. An officer of the Medical Reserve Corps with the necessary medical supplies to care for the sick and injured will be assigned to each camp or group of camps if located close together. Assignments will be made by the corps area commander under whose jurisdiction the camp is located, for a period of six months, which may be extended at the discretion of the corps area commander. One captain and two lieutenants will be appointed for each thousand men enrolled in the conservation corps. Medical Reserve officers who desire such assignment should apply direct to their corps area commanders. Physicians who are not members of the reserve may secure appointments by applying to the nearest corps area commander or to the Surgeon General's Office, Washington, D. C. Addresses of the corps area headquarters and the states comprised in each are as follows:

First: Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut. Headquarters, Army Base, Boston 9, Mass.

Second: New Jersey, Delaware and New York. Headquarters, Governors Island, N. Y.

Third: Pennsylvania, Maryland, Virginia, District of Columbia. Headquarters, U. S. Post Office and Court House, Baltimore.

Fourth: North Carolina, South Carolina, Georgia, Florida, Alabama, Tennessee, Mississippi and Louisiana. Headquarters, Oakland City Station, Atlanta.

Fifth: Ohio, West Virginia, Indiana, Kentucky. Headquartera, Fort Hayes, Columbus, Ohio.

Sixth: Illinois, Michigan, Wisconsin. Headquarters, U. S. Post Office Building, Chicago.

Seventh: Missouri, Kansas, Iowa, Arkansas, Nebraska, Minnesota, North Dakota, South Dakota. Headquarters, Baird Building, Omaha.

Eighth: Texas, Oklahoma, Colorado, New Mexico, Arizona. Headquarters, Fort Sam Houston, San Antonio, Texas.

Ninth: Washington, Oregon, Idaho, Montana, Wyoming, Utah, Nevada and California. Headquarters, Presidio, San Francisco.

The pay and allowances of a first lieutenant are approximately $250 a month. Living accommodations are furnished at the camps for the officer only and at no cost to him. Each camp provides arrangements for mess at a minimum charge. Transportation is furnished by the government from the officer's home and return. Further information concerning appointment to the Medical Reserve Corps or to duty with the Civilian Conservation Corps may be obtained by applying direct to the surgeon of the corps area of which the applicant is a resident.

CORRECTION

Increase in Population.—In the State Board Number of The Journal, April 28, page 1402, appears a statement to the effect that the increase in population between 1920 and 1930 was 6 per cent. The sentence should have read, "According to the U. S. Census Bureau, the population in 1933 was increasing at the rate of seven-tenths of 1 per cent."

Foreign Letters

LONDON

(From Our Regular Correspondent)

April 14, 1934.

The Payment of Hospitals and Physicians for Traffic Accidents

The minister of transport, Mr. Oliver Stanley, received a deputation appointed by the parliamentary medical committee (drawn from physicians and surgeons who are members of either of the legislative chambers) in regard to the payment of hospitals and physicians for traffic accidents. The speakers emphasized the urgent need for compensation for services rendered and material loss arising from the treatment of these accidents and suggested the incorporation in the forthcoming bill to deal with traffic accidents of provisions on the lines of the road traffic emergency treatment bill, which has passed through the house of lords (THE JOURNAL, January 6, p. 55). The minister expressed sympathy with the position of the hospitals and physicians in connection with such accidents. He intimated that the new bill will be so widely drawn that it will be possible for members to move amendments to achieve the object desired. As it is not suggested that the cost should be met from state funds but from the compulsory insurance policies of drivers, there would be no difficulty over a financial resolution. Members of the deputation pointed out that an intolerable position had been reached, that physicians had moved away from houses at busy crossings because they were called out at all hours of the day and night and often received no payment or even thanks. In many instances more than half the beds at cottage hospitals were occupied with bad accident cases, with the result that the local subscriptions were falling away. One of the difficulties, apparently, was that motorists hesitated to make any payment to a physician on the ground that it might be construed as an admission of liability. After the conference, Lord Moynihan stated to the press that he knew of a physician who had attended more than a hundred traffic accidents and had not received a cent. There were over two million licenses and at a cost of 50 cents a year, or less than a cent a week, physicians could be guaranteed a $3 fee and hospitals could be paid for emergency treatment.

The Falling Birth Rate

Dr. E. W. MacBride, professor of zoology in the Imperial College of Science, in an article contributed to the *Daily Dispatch* expresses satisfaction at the falling birth rate, which he regards as having saved the nation from starvation. Fifty years ago the birth rate in Great Britain was 34 per thousand; today it is 15. As a biologist he finds that, while species of animals and plants vary much in the number of offspring, that number is directly related to the dangers of childhood. The herring lays 20,000 eggs a year, the fulmar petrel only one, yet the average population of the two species remains about the same over a period of years. The egg of the herring is fastened to a stone and then abandoned, whereas the egg of the petrel is hidden in a hole till the chick hatches, and this is then carefully tended until it can fly. Obviously the young fulmar has a better chance of living to grow up than the young herring and therefore, to maintain the existing population, much fewer of the former are required. In London 150 years ago out of every five children born three died before the age of 5 years. Now the infantile death rate is only 35 per thousand births. If the birth rate had remained at the level of fifty years ago and no emigration had occurred, people would have been so closely packed in this island that life would have been impossible. The latitudes in which the white race can live and bring up families are limited, and only two of the British dominions fall within them. Canada is vast, but an arctic climate renders four fifths of it unsuitable. Moreover, in the east there is a large granite plateau of 2,000,000 square miles, covered with barren soil and capable of only the poorest kind of farming. Australia is within tropical and subtropical zones, and three fourths is rainless desert. The population is only 6 million, of which half is concentrated in the four principal cities. Successful farming is possible only on a strip along the eastern and southern coasts. Nature's law for the benefit of every species is natural selection, which means restriction of reproduction to the most vigorous. But by social services the human race strives to counteract natural selection and then wonders at the size of the unemployment rolls.

The Treatment of Men Burned in Colliery Explosions

The mines department has been exercised by the high mortality of men burned in colliery explosions. During the last two years, out of sixty-two men brought to the surface after explosions forty-five died in hospitals from the effects of the burns. It has been noticed that men even slightly burned have died after being brought to the surface. It is therefore recommended that men who are burned should be carried up on stretchers, well covered with blankets, even though the burns do not appear to be serious. The report shows that nearly all the men found dead in the mine after explosions have died not from the burns they received but from carbon monoxide poisoning. It is therefore thought that those found alive have been affected more or less by this gas. Owing to the serious effect of carbon monoxide on the heart and respiration, it is recommended that a mixture of oxygen containing 7 per cent of carbon dioxide should be administered as soon as possible—if possible, at the place where the men are found. It is also pointed out that in extensive superficial burns, such as are produced in explosions, toxic symptoms come on early—in five or six hours—and are pronounced. To obtain the most rapid result from local treatment by a coagulating agent, a 20 per cent solution of tannic acid in 1:1,000 acriflavine hydrochloride should be applied.

BERLIN

(From Our Regular Correspondent)

March 19, 1934.

The Notifiable Diseases in 1933

According to statistics of the federal bureau of health, diphtheria and scarlet fever caused the highest percentage of cases in the German reich in 1933. In comparison with the two previous years, the morbidity and the mortality increased. The adjoining table shows the figures for three years:

	Case Incidence			Deaths			Case Mortality (per Cent)		
	1931	1932	1933	1931	1932	1933	1931	1932	1933
Diphtheria.....	56,627	64,158	74,559	3,005	2,974	3,628	5.47	4.64	4.87
Scarlet fever...	46,180	55,268	76,749	471	397	546	1.60	0.72	0.71

After the apex of the seasonal incidence was reached in the forty-eighth calendar week, the mortality from diphtheria in 1933 was considerably lower than in 1932. The morbidity from scarlet fever was 40 per cent higher than in 1932, without approaching, however, the morbidity for 1927, 1928 and 1929 (19,883, 122,225 and 95,909 cases). The increase in the number of deaths from diphtheria and scarlet fever showed about the same ratio as the increase in the number of cases.

The cases of infantile paralysis dropped from 3,733 in 1932 to 1,249 in 1933, and the deaths declined from 315 to 131.

Epidemic cerebrospinal meningitis showed a slight increase. The incidence for the years 1929-1933 was 959, 663, 574, 518 and 598, which resulted in 503, 351, 307, 256 and 279 deaths,

respectively. In the years mentioned, the deaths amounted to 52, 53, 52, 49 and 47, respectively, per hundred cases.

Cases of illness due to meat, fish and sausage poisoning show a further decline for 1933 (1,527 as against 2,477).

The decline in cases of typhoid was 25 per cent; in paratyphoid (although no details were given), 28 per cent, and in dysentery, 48 per cent. The number of deaths from dysentery declined only 3 per cent (from 126 to 122); from paratyphoid, 10 per cent; from typhoid, 28 per cent (from 513 to 369).

The number of persons injured by the bite of animals with rabies, or by animals suspected of being rabid, rose from sixty-four to 132 (one fatal case). There were three cases of glanders and two of trichinosis, with no deaths.

During the previous year, 1932, no cases of rabies or of glanders or trichinosis were notified. The number of cases of anthrax declined from eighty-one in 1932 to seventy-nine in 1933; the number of deaths remained the same (ten).

The cases of childbed fever showed a decline (4,826 cases, 1,379 of which proved fatal); thus, there were 28.6 deaths to each hundred cases. The peculiarly favorable status of tuberculosis in Prussia (in 1932, only 39,716 cases of contagious pulmonary and laryngeal tuberculosis were notified) was preserved in 1933, there having been only 39,832 notified cases. The number of deaths showed a slight decrease (decline from 20,945 to 20,868).

Increase in the Incidence of Diphtheria

In 1933, as Professor Catel, director of the Kinderklinik announced, not only did the number of persons contracting diphtheria show an increase, but there was also a distinct change in the course of the disease. The highly toxic type of diphtheria with a high case mortality was more frequent than in former years. Since the methods heretofore used for active immunization (Behring's vaccine, toxin-antitoxin mixture, Ramon's anatoxin) are neither absolutely harmless nor certain to produce an absolute immunity, the time has not yet come for compulsory vaccination on a large scale. It may be stated that the Löwenstein protective ointment does not appear to be effective.

The Bacterial Flora of the Vagina

Researches that Siebke carried out at the Universitäts-Frauenklinik in Kiel on the bacteriology of the vaginal secretion revealed either pure cultures of streptococci or cultures composed chiefly of streptococci, in 54 per cent of the 1934 gravidas. The presence of streptococci was demonstrated in about 70 per cent of all cases examined. Febrile puerperal disorders, in spite of a normal childbirth, showed the highest percentage in the cases that, during pregnancy, presented in the vagina a pure streptococcus flora, predominantly streptococci, or the latter mixed with Bacillus coli. In these puerperants the morbidity was almost three times as high as in women with a pure, or prevailingly pure, Bacterium vaginalis flora at the end of term. Foul smelling lochia are less frequently present in association with a pure, or prevailingly pure, Bacterium vaginalis flora than with other micro-organisms. According to the cases examined, febrile puerperal disorders following a spontaneous birth are the more rare, the more distinctly the intact acid protection in the region of the vagina is characterized by a corresponding bacterial flora.

The Diagnosis of Lead Poisoning

The pharmacologist Prof. Dr. Behrens, who has for years studied questions pertaining to lead, spoke recently before the Berlin Medical Society. By the use of radioactive lead isotopes, with which he poisoned mice, he was able to establish that, contrary to other older views, lead poisoning constitutes a genuine cumulative disease resulting from a difference between the intake and the excretion of the poison. Lead accumulates chiefly in the liver and kidney, and secondarily in the bones. In the blood there is an adsorption by the red corpuscles. In the bones it is significant that the storage occurs chiefly in the subepiphyseal areas and under the periosteum. By the use of the radioactive lead the demonstration is simple, as the lead produces light spots on a photographic plate. It was possible in this manner to demonstrate that the lead undergoes a rapid resorption and a slow excretion in the animal, and that it is a highly cumulative poison. But, when large quantities are ingested, a considerable portion is not resorbed by the intestine but is eliminated with the feces. The elimination of the stored portions takes place slowly; namely, along with the bile into the intestine and by way of the kidney. The elimination occurs in the form of lead sulphate, which is soluble with difficulty.

Behrens discussed the methods for the demonstration of small quantities of lead. He has adopted the method of H. Fischer, which, by means of a dye (diphenylthiocarbazone), demonstrates colorimetrically lead in quantities as low as thousandths of a milligram. Behrens emphasized that researches must be instituted to discover where the borderline between the normal and the pathologic secretion of lead lies. Until that has been done, it will be impossible to render an expert opinion in questions concerning the degree of disability or amount of compensation.

Promotion of the Early Marriage of Physicians

Among the policies of the new government, the promotion of early marriages plays no small part. The Bavarian minister of the interior has recently taken up the cause of the physicians. A careful examination of medical journals reveals that in advertisements of positions open for physicians there is an occasional cautious statement to the effect that unmarried applicants will receive first consideration. The federal ministry of the interior has issued a new decree concerning the promotion of the early marriage of physicians. Attention is directed to an article by a hospital physician and to the opinions expressed by the federal bureau of health, in which it is emphasized that there exists an absolute necessity and duty to reserve, as a rule, all openings for first assistants, and particularly for head physicians, for physicians who are either married or who plan to marry as soon as a suitable position is secured; furthermore, that, in filling posts for head physicians, preference must be given to applicants who have a large number of children. An inquiry has now been launched to ascertain whether it will be possible to provide homes for such physicians to a greater extent than has been done in the past.

PARIS

(From Our Regular Correspondent)

March 21, 1934.

Ten Years of Experience with the Ramon Anatoxin

Mr. G. Ramon, who now occupies, at the Academy of Medicine, the chair made vacant by the death of his teacher Roux, gave a lecture recently in which, as is the custom, he gave a survey of his discoveries. Ten years has elapsed since he proposed diphtheritic anatoxin for immunization against diphtheria. The method today enjoys world-wide acceptance. The immunity that the vaccination produces is demonstrated by the Schick test and by the amount of specific antitoxin in the blood serum of the persons vaccinated. It is durable, and, at the end of five years, the percentage of subjects immunized remains about the same as it was just after the vaccination. In recent years, Ramon has endeavored to increase the efficacy of the vaccination. The method of combined vaccination (antityphoid vaccine plus anatoxin), which he developed with the collaboration of Zoeller, answers this double purpose. It thus becomes possible to effect simultaneously two immunizations and to reinforce the immunity secured. Its use is recommended

by the law of December 1931, which made vaccination with anatoxin compulsory in the army. The adoption of anatoxin of high antigenic value has brought new progress. It requires only two injections and produces an immunity of a high degree. In closing, Ramon declared that with the systematic and general use of vaccination by anatoxin there is hope that diphtheria may be entirely eliminated.

The Harmful Effects of Oil Burning Steamers on Marine Animals

Since mazout has been widely employed for firing the boilers of ships, harmful effects on marine animals have been observed. The petroleum left on the surface of the sea forms a layer that is scarcely perceptible but which, as it is never removed, increases with the years. Prof. Charles Richet has pointed out its effects on sea life in a communication to the Academy of Sciences. A thin coat of mazout covers the most frequented sea routes, particularly in the smaller areas, such as the English Channel and the North Sea, and for years considerable destruction has been observed among the inhabitants of these seas. The plankton, which constitutes the food of many fish, is being destroyed. Oysters are dying by the millions. Many fish are killed when the coating of oil obstructs their gills. The oil impregnates the wings of diving birds and gums up their feathers. As a result, these birds die from the cold. One sees, on the northern coast of France, veritable hecatombs of seagulls. In England, the Society for the Protection of Birds has called the attention of navigation companies to this lamentable destruction. The filters employed recover a part of the oil but allow a considerable part to escape. As these conditions brought about by oil burning vessels are likely to become worse, it may be that, in the course of centuries, important changes will be brought about in the animals of the sea, by this new factor.

An Electric Thermometer for Measuring Surface Temperatures

Mr. Jean Saidman presented recently to the Société des médecins des hôpitaux de Paris an electric thermometer that is accurate, although simple. It consists of two plates that are applied to the point the temperature of which one desires to measure. The electric current produced at the level of these plates enters metal coils connected with a millivoltmeter having a graduated centigrade scale. The figure read on this apparatus must be added to that of a mercury thermometer placed in the metal coils. Only from ten to fifteen seconds is required to ascertain the temperature of any point on the skin or the accessible mucous membranes. The apparatus enables one to study the pathology of the joints, the evolution of arthritis—accompanied by an elevation of temperature that diminishes as the attack recedes. One can study also surface elevations of temperature such as accompany inflammatory attacks or deep congestions.

Radium in the Treatment of Epulis

Degrais published, a few years ago, a report of a case of epulis as large as a walnut, which was cured by radium. Since then he has observed a number of cases that were sent to him by dentists, and he has published an article in which he states that radium therapy is the surest treatment for epulis. The technic that he has finally adopted is the following: Under local anesthesia, he implants in the tumor needles from 1 to 2 cc. long and containing from 1.5 to 2 mg. of radium, depending on the size of the epulis, the needles being more or less numerous, depending on the case. The results were always good, and Degrais has never observed a recurrence. This is an excellent mode of treatment for all forms of epulis.

ITALY

(From Our Regular Correspondent)

Feb. 15, 1934.

Congress of Obstetrics and Gynecology

The twenty-first national congress of obstetrics and gynecology was held at Bari, under the chairmanship of Professor Gaifami, director of the Clinica ostetrica of the Università Adriatica.

The official speaker on the first topic, "Vaginal Celiotomy," was Professor Bertino of Padua. The indications for such an intervention may be divided into obligatory and preferential. To the obligatory indications belong the cases in which the abdominal route is contraindicated and the vaginal route constitutes the only way to cure the disease. In cancer of the cervix, Bertino prefers the abdominal route; in cancer of the corpus and in chorio-epitheliomas, the vaginal route. In prolapse of the uterus he limits operative treatment by way of the vagina to the rare cases of neoplastic or hypertrophic uterus or irreducible prolapse. The vaginal route and the Resinelli method are indicated in cases in which retroversion is associated with prolapse of the uterus. In uterine perforations one has recourse to the vaginal route only in clean cases, and in tuberculosis of the genitalia only in cases with frank localization in the uterus. In obstetrics, vaginal celiotomy is reserved for cases presenting hemorrhage due to a remnant of placenta remaining in the uterus, postpartum hemorrhages resistant to other methods, and hemorrhages due to placenta praevia or vesicular mole.

The second topic, "Female Sex Hormones," was introduced by Professor Acconci of Pavia. He emphasized that thus far only the more important aspects of the humoral correlations had been analyzed, whereas no less importance attaches to the features still unknown.

Professor Gaifami spoke on gynecologic radiotherapy, and suggested certain criteria for the regulation of the subject, the need of distinguishing the use of radium from that of roentgen rays, and of soliciting in the field of gynecologic radiotherapy the collaboration of the gynecologist. The congress approved a resolution to that effect.

Professor Gaifami spoke on the development of mother's aid in southern Italy. There is a discrepancy in the number of institutions in northern and southern Italy, to the disadvantage of the latter. The speaker suggested the creation of special obstetric-gynecologic departments in every chief town in the provinces. The birth rate is higher in the South.

For the next congress the island of Rhodes was selected. The two topics on the program are: (1) "Woman in Relation to Sport Activities," chief speaker, Professor Scaglione, and (2) "The Lower Segment of the Uterus in Its Anatomic Peculiarities, Its Physiologic Behavior and Its Clinical Importance."

The Treatment of Leukemia

At a meeting of the Società medico chirurgica of Bologna, Professor Viola brought out that the clinical manifestations of the leukemic states differ widely. With regard to roentgen treatment, his experience shows that better results are obtained with small doses administered at varying intervals, depending on the case.

Volta called attention to the determination of the basal metabolism in judging the gravity of the chronic leukemic disorders and for establishing a prognosis. Such a test is useful also in radiologic treatment.

Schiassi spoke on the periods of remission in chronic leukemic myelosis. He gave an account of a patient who was subjected to systematic study from 1924 until today, roentgen treatment being applied from time to time. At present he is in good

health. The speaker considers the case an example of true clinical recovery.

Azzi described cases of lymphopenic lympholeukemia, with an acute course, in which some benefit resulted from blood transfusion.

He thinks that some benefit could be derived by directing roentgen rays to the tonsils.

Possati, in radiologic treatment of chronic leukemia, follows commonly the technic of applying small fractional doses to the liver and the spleen. He noted that some patients who do not react to ordinary treatment received benefit from brief applications of rays in accordance with the Ghilarducci method of variable filtration.

Meeting of the Medicosurgical Society of Pavia

The Società medico-chirurgica of Pavia met recently under the chairmanship of Prof. A. Pensa. Filippi and Locatelli reported the results of their trials of vaccinotherapy by the intravenous route in undulant fever, in which they follow the norms indicated by Bianchi. They found that this method of treatment is applicable in certain stages of the disease and does not cause untoward incidents. It is well to commence with small doses and to increase the dose rapidly so as to provoke a sharp febrile reaction. The beneficent effects of the treatment appear early. To prevent recurrences it is well to continue the injections after complete defervescence, seven or eight injections being given in all.

BUCHAREST

(From Our Regular Correspondent)

April 5, 1934.

The Draft of a New Law on Quackery

The Bulgarian Board of Health has transmitted a memorandum to the government, asking for legislative help against quackery, which is flourishing in this country. The draft defines quackery as follows: (1) When any one without a license to practice medicine undertakes to treat patients professionally, advertises or calls himself a doctor, prescribes or supplies to his patients drugs that a chemist may not sell without a prescription; (2) when a dentist extends his therapeutic activities beyond the realm of dentistry and gives a general anesthetic, for example, or when a specialist in massage treats patients without their being referred to him by a doctor, or a midwife administers a general anesthetic or supplies drugs other than those which she is specifically qualified to dispense; (3) when a doctor, not licensed as a specialist, poses in any way as a specialist; (4) when a doctor prescribes an unnecessarily large quantity of drugs solely to profit thereby, or if he advises, exclusively for his own profit, an operation or medical treatment for a disease for which such treatment is obviously unsuitable, or for a disease from which the person concerned is plainly not suffering; (5) when a doctor prescribes drugs ostensibly for medical purposes, although cognizant of their being wanted for other purposes (drugs of addiction); (6) when a doctor lends his name to the advertisement of drugs, medical equipment, foods or drinks in such a way that the public is liable to form an inaccurate opinion as to the real value of said articles, and (7) when a doctor lends his name to the activities of unqualified persons, to make the public believe their medical activities are authorized by him, such persons are guilty of quackery.

The Incidence of Echinococcosis in Europe

In a treatise in *Praxis* on the occurrence of echinococcosis in Europe the statement is made that the prevailing opinion that Mecklenburg and Pomerania are the areas most affected needs correction. H. Toole, who studied conditions in Greece, found that in the Piraeus one person in 1,000 had an echinococcic infection, whereas in Mecklenburg the rate is only 1:3,585, while the population of Rostock (the city with the most extensive incidence in Mecklenburg) shows a rate of 1:1,370. In the province of Cephalonia the corresponding figure is 1:529. Echinococcic cysts have been found in 2.3 per cent of necropsies in Athens, whereas in Rostock during the period 1861-1905 the percentage was 1.98 and in 1905-1922 only 0.57. Dikoff, who studied the conditions in Sofia in Bulgaria, states that in 9,770 necropsies between 1900 and 1908 the echinococcus was the cause of death in four, or 0.49 per cent. In 1922, out of 780 necropsies, death in seven cases was found to be due to the echinococcus. R. Peicic, who has collected the cases in Yugoslavia in the last ten years, found 921 cases, including 241 from Bosnia and South Serbia. Peicic regards Greece as one of the most badly infected of European countries. According to Dew, the disease is uncommon in England.

In Hungary, Czirer analyzed all the cases observed in the surgical clinics in 1917-1927 and found that echinococcic infection accounted for 0.2 per cent of the total. He observed that echinococcic cysts are much more prevalent among the rural than among the urban population. While human infection is not more prevalent in Hungary than in the western countries, Drs. Bodrogi and Lörincz, who studied the spread of echinococcosis in Hungary, consider it advisable to take strong measures against the echinococcus here as elsewhere.

Massage Establishments

According to a responsible Bucharest newspaper the public health authorities have issued an order that will put an end to grave abuses in massage establishments and at the same time regulate their sphere of action. It was explained that this restriction was necessary because massage establishments had become the haunts of secret vice. According to the new regulations, massage can be practiced on persons only of the same sex and only on healthy subjects, the so-called curative massage being allowed only under medical supervision. Cosmetic massage without the use of electrical appliances may be practiced freely. The order subjects professional masseurs to special examination, and no licenses to practice will be given to applicants who have been punished for any offenses.

BELGIUM

(From Our Regular Correspondent)

Feb. 27, 1934.

Certification of Specialists

The title of "medical specialist" gave rise recently to a discussion before the Academy and various medical societies. The discussion is not yet closed, but the Société belge de chirurgie has unanimously supported the resolution of Professor de Beule affirming the need of creating a special surgeon's diploma, which, without depriving the doctors of medicine, surgery and obstetrics of the rights that the law confers on them, will emphasize the need of postgraduate training for those who aspire to an official post of surgery in a hospital or a clinic. The technical and scientific advances in surgery demand imperatively the creation of a certificate guaranteeing that the holder has acquired a thorough knowledge of surgery by special studies.

Exanthematous Typhus

Bruynoghe and Jadin have presented a communication to the Royal Academy of Medicine on exanthematous typhus. They isolated the virus from rats caught in the port of Antwerp. It is therefore not impossible that sporadic cases of exanthematous typhus may appear in that port or elsewhere. The

virus of exanthematous typhus may adapt itself to other rodents (mice, dwarf mice, voles), and these rodents may play a part in the dissemination of the disease. The Weigl vaccine confers evident protection against typhus and should be applied whenever general health measures are insufficient to protect against contaminations.

Hospital Organization

At the third International Congress of Hospitals, the committees appointed to study the organization and equipment of hospitals under the chairmanship of Dr. Alter reached the following conclusions:

In order to secure the best results from hospital organization, small hospitals must be avoided, and all possible influences must be made to combine to promote the physical and psychic personality of the patients. Hospital care and treatment will not attain the maximal effectiveness unless they center on the individual patient.

The hospital of the future must be conceived on a large scale from the point of view of plan and organization, but in spite of its size it must guarantee the most complete individualization in the treatment. These two conditions, if realized, will result in the maximum economic efficiency.

From the administrative point of view, the best type of hospital is that containing about 600 beds. Smaller hospitals should be planned so that they can be enlarged and made to approach the ideal type without any excessive outlay.

The best type of 600-bed hospital should consist of absolutely distinct departments the collaboration of which is possible without friction. The arrangement should be such as to prevent loss of time in going back and forth between the departments. As far as possible, the patient should not be moved but rather the personnel and the equipment.

Large wards are excluded. Rooms with several beds are not practical. Rooms with one or two beds are the ideal. To attain this, a service unit comprising twenty-five beds, the majority of the rooms with only one bed should be adopted. The rooms should open on a central corridor. The equipment of the sickrooms and of the service units should conform in all respects to the fundamental principles stated.

Aid for Natives of the Congo

The Queen Elizabeth Fund for the medical relief of the natives of the Belgian Congo was established as a result of the endowment of a medical fund to combat tropical diseases in the Belgian Congo. The income from this endowment is to be used by the Queen Elizabeth Fund to provide medical aid for the natives. The report of the Queen Elizabeth Fund in 1931, which has just appeared, can be expected to give only a general idea of the society's mode of functioning. The directive agencies in Belgium are the administrative council and the committee on management, with a permanent office in Brussels. There is an executive committee, presided over by the governor general of the Belgian Congo, and an executive bureau, at present in the province of Congo Kasai. Besides the detection and the treatment of diseases, and prophylaxis and hygiene in general, the program includes the application of measures designed to promote the well being and growth of the native population. The program comprises also the protection of the mother and child, the crusade against social diseases, industrial hygiene, and the like. In 1932 the crusade against social diseases was exceedingly energetic as regards yaws and syphilis. The number of new trypanosomic infections is diminishing steadily and has dropped to below that of 1931; namely, to 0.26 per cent. The medical personnel attached in 1932 to the sector of the Lower Congo comprised twenty-two physicians (fifteen in 1931) and fifty-two sanitary officers and nurses (thirty-nine in 1931).

Marriages

STANLEY MORTIMER DILLENBERG, Newark, N. J., to Miss Margery Jean Siegel of New York, April 19.

ROBERT LAURENCE KNIPFER to Miss Marian Kathleen Knapp, both of Brandon, Iowa, March 13.

ALLEN CLAY GWINN JR. to Miss Mary Virginia Homan, both of El Paso, Texas, April 25.

MAX THOMAS BOLOTIN, Chicago, to Miss Mary R. Mann of Shanghai, China, February 25.

JOSEPH B. PRIESTLEY to Miss Elizabeth Jane Lutz, both of Des Moines, Iowa, April 14.

CLARENCE G. POOL, Compton, Ill., to Miss Helen Schnuckel at New Orleans, March 27.

Deaths

Harry Lee Barnes ✠ Wallum Lake, R. I.; University of Vermont College of Medicine, Burlington, 1898; past president of the Rhode Island Medical Society; member of the American Climatological and Clinical Association; formerly director of the National Tuberculosis Association; at one time superintendent of the Stony Wold Sanatorium, Lake Kushaqua, N. Y.; superintendent of the Rhode Island State Sanatorium; aged 56; died, April 8, of heart disease.

Thomas E. Hodges, Rogers, Ark.; Arkansas Industrial University Medical Department, Little Rock, 1888; formerly professor of osteology, College of Physicians and Surgeons, Little Rock, professor of anatomy, histology and embryology, and lecturer on anatomy, University of Arkansas School of Medicine, Little Rock; formerly mayor of Rogers; aged 74; died, March 25, of influenza and myocarditis.

William Gardiner Anglin, Kingston, Ont., Canada; Queen's University Faculty of Medicine, Kingston, 1883; M.R.C.S., England, 1884; emeritus professor of clinical surgery, Queen's University Faculty of Medicine; fellow of the American College of Surgeons; formerly physician to the Kingston Penitentiary; aged 77; died, February 4.

Charles Edward Caldwell, Cincinnati; Medical College of Ohio, Cincinnati, 1884; professor emeritus of surgical anatomy, University of Cincinnati College of Medicine; member of the Southern Surgical Association; formerly on the staff of the Cincinnati General Hospital; aged 73; died, March 23, of coronary thrombosis.

Julius A. Chevigny, Hammond, Ind.; School of Medicine and Surgery of Montreal, Que., Canada, 1895; member of the Indiana State Medical Association; secretary of the board of health of Hammond; on the staff of St. Margaret's Hospital; aged 61; died suddenly, March 17, in Austin, Texas, of coronary occlusion.

David Nowlin, Montgomery City, Mo.; St. Louis Medical College, 1890; member of the Missouri State Medical Association; fellow of the American College of Surgeons; bank president; aged 67; died, March 5, in a hospital at St. Louis, of chronic nephritis, diabetes mellitus and gangrene of the right foot.

Wilkin Blackburn Stevens ✠ Kimball, W. Va.; Maryland Medical College, Baltimore, 1904; past president of McDowell County Medical Society; formerly member of the Public Health Council; medical director of the Stevens Clinic Hospital; aged 56; died, March 8, at Coral Gables, Fla., of coronary occlusion.

James O. Ringold, Winona, Miss.; University of the South Medical Department, Sewanee, Tenn., 1897; member of the Mississippi State Medical Association; past president of the Winona District Medical Society; on the staff of the Winona Infirmary; aged 60; died, March 31, of arteriosclerosis.

Arthur Henry McCreight ✠ Fort Dodge, Iowa; Rush Medical College, Chicago, 1897; past president of the Webster County Medical Society; served during the World War; formerly county coroner; aged 67; on the staff of St. Joseph's Mercy Hospital, where he died, March 28, of pneumonia.

Richard Benson Stewart, Warren, Pa.; College of Physicians and Surgeons, Baltimore, 1881; member of the Medical Society of the State of Pennsylvania; on the staff of the Warren General Hospital; aged 72; died, March 25, of pneumonia, as the result of an accidental fall.

John Richard Benton, Stevensville, Md.; University of Maryland School of Medicine, Baltimore, 1883; for twenty years member of the county board of education and for twelve years judge of the orphans' court; aged 75; died, March 19, of chronic nephritis and heart disease.

Henry Dixon Stewart, Monroe, N. C.; University of Maryland School of Medicine, Baltimore, 1898; member of the Medical Society of the State of North Carolina; served during the World War; aged 62; was found dead in bed, March 20, of heart disease.

Perry Gabriel Dunlap, Lawton, Okla.; Vanderbilt University School of Medicine, Nashville, Tenn., 1881; University of Nashville Medical Department, 1882; member of the Oklahoma State Medical Association; aged 75; died, January 21, of angina pectoris.

Byron Stanley Loney ● Detroit; University of Toronto Faculty of Medicine, Toronto, Ont., Canada, 1917; fellow of the American College of Surgeons; on the staff of the Harper Hospital; aged 50; died, March 17, of coronary thrombosis and arteriosclerosis.

Benjamin Beamer Morrow, Spiceland, Ind.; Eclectic Medical Institute, Cincinnati, 1897; member of the Indiana State Medical Association; aged 61; died, February 27, in the Methodist Episcopal Hospital, Indianapolis, of prostatic hypertrophy.

Ernest Charles Daniel MacCallum, Kingston, Ont., Canada; McGill University Faculty of Medicine, Montreal, Que., 1897; associate professor of medicine, Queen's University Faculty of Medicine; aged 61; died, February 6, of pneumonia.

George Frederick Bainter, Strasburg, Ohio; Ohio Medical University, Columbus, 1896; formerly mayor of the village and county coroner; served during the World War; aged 63; died, March 31, in the Union Hospital, Dover, of myocarditis.

John Charles Humphreys ● Philadelphia; Hahnemann Medical College and Hospital of Philadelphia, 1908; Jefferson Medical College of Philadelphia, 1910; formerly a medical missionary; aged 54; died, March 31, of hypostatic pneumonia.

Robert Thomas Dott, Sioux Falls, S. D.; Rush Medical College, Chicago, 1883; Bellevue Hospital Medical College, New York, 1885; member of South Dakota State Medical Association; aged 75; died, January 3, of cerebral hemorrhage.

Joseph Francis Brewer, Minneapolis, Kan.; University Medical College of Kansas City, 1889; member of the Kansas Medical Society; for many years president of the board of education; aged 79; died, March 11, of lobar pneumonia.

Helmer Walter Huseby, Floodwood, Minn.; University of Minnesota Medical School, Minneapolis, 1926; member of the Minnesota State Medical Association; aged 34; died, March 22, in a hospital at Duluth, of pneumonia.

Robert McCune Smith, Kansas City, Mo.; Kansas City Medical College, 1902; member of the Missouri State Medical Association; aged 72; died, March 18, in the Research Hospital, of carcinoma of the left jaw, liver and brain.

William Sheppard Norman ● Hamburg, Ark.; University of Louisiana Medical Department, New Orleans, 1875; past president of the Ashley County Medical Society; aged 82; died, March 13, of hypostatic pneumonia.

Peter Paul Klopp, Philadelphia; Jefferson Medical College of Philadelphia, 1890; member of the Medical Society of the State of Pennsylvania; also a lawyer and pharmacist; aged 66; died, March 24, of arteriosclerosis.

Howard Banks Ames ● Alva, Okla.; Keokuk (Iowa) Medical College, College of Physicians and Surgeons, 1901; past president of the Woods County Medical Society; aged 60; died, March 14, of carcinoma of the stomach.

Harry A. P. Neel, Philadelphia; University of Pennsylvania School of Medicine, Philadelphia, 1877; member of the Medical Society of the State of Pennsylvania; aged 79; died, February 5, of uremia and arteriosclerosis.

Linn Bayard Marshall, Portland, Maine; University of Colorado School of Medicine, Denver, 1913; member of the Maine Medical Association; served during the World War; aged 51; died, March 30, of heart disease.

Kenneth Bowles Huffman, Joplin, Mo.; St. Louis University School of Medicine, 1910; member of the Missouri State Medical Association; served during the World War; aged 50; died, March 12, of angina pectoris.

Clarence Atwood Baker, Portland, Maine; Medical School of Maine, Portland, 1882; member of the Maine Medical Association; aged 82; died, March 30, in St. Barnabas Hospital, of strangulated inguinal hernia.

Wladyslaw Josef Alfons Schwarz, Jersey City, N. J.; Eclectic Medical College of the City of New York, 1902; member of the Medical Society of New Jersey; aged 73; died, March 4, of angina pectoris.

Edgar Oriel Newlin, Fontanet, Ind.; Physio-Medical College of Indiana, Indianapolis, 1904; served during the World War; aged 57; died, February 5, in the Union Hospital, Terre Haute, of pneumonia.

Samuel Freeman Hassler ● Harrisburg, Pa.; Jefferson Medical College of Philadelphia, 1894; aged 65; for many years on the staff of the Harrisburg Hospital, where he died, March 21, of heart disease.

John Denver Siddall, Carey, Ohio; Eclectic Medical Institute, Cincinnati, 1898; member of the Ohio State Medical Association; served during the World War; aged 61; died, March 15, of pneumonia.

William Hill Black, Kansas City, Mo. (licensed in Oklahoma under the Act of 1908); member of the Oklahoma State Medical Association; aged 63; died, February 28, of endocarditis and cholecystitis.

William M. Long, Liberty, S. C.; Medical College of the State of South Carolina, Charleston, 1896; member of the South Carolina Medical Association; aged 65; died, March 19, of coronary thrombosis.

George Morrison Logan ● Akron, Ohio; Rush Medical College, Chicago, 1909; served during the World War; on the staff of the City Hospital; aged 55; died suddenly, March 21, of heart disease.

West Montgomery Carson, Clarksdale, Miss.; New York Homeopathic Medical College and Hospital, 1893; veteran of the Spanish-American War; aged 62; was shot and killed, Dec. 19, 1933.

Robert Burton Newcomb, Cleveland; Western Reserve University Medical Department, Cleveland, 1893; also a lawyer; aged 61; died, March 19, of an incised wound of the throat, self inflicted.

Edward William Nolan, Toronto, Ont., Canada; Queen's University Faculty of Medicine, Kingston, 1916; served during the World War; aged 43; died, February 25, of cerebral hemorrhage.

John Rupert Elliott, Palacios, Texas; University of Texas School of Medicine, 1902; veteran of the Spanish-American and World wars; aged 55; died, February 10, of coronary obstruction.

Irving Solby, Boston; Harvard University Medical School, Boston, 1907; formerly on the staff of the Massachusetts General Hospital; aged 53; died suddenly, March 26, of heart disease.

Peter Andrew Snell, Baltimore; University of Rochester (N. Y.) School of Medicine, 1933; aged 27; an intern at the Johns Hopkins Hospital, where he died, March 14, of pneumonia.

Michael Sheridan McGauran, Lawrence, Mass.; Rush Medical College, Chicago, 1888; member of the Massachusetts Medical Society; aged 86; died, March 25, of arteriosclerosis.

Walter Waverly Scott ● Kensington, Kan.; University Medical College of Kansas City, 1906; served during the World War; aged 53; died, March 18, of bronchopneumonia.

George Vernon Harcourt, Powassan, Ont., Canada; Trinity Medical College, Toronto, 1896; member of the legislature; aged 59; died, February 1, in Toronto, of coronary thrombosis.

Lucy Anne Kirk, Boston; Boston University School of Medicine, 1893; aged 75; died, April 5, in the New England Deaconess Hospital, of coronary infarct and diabetes mellitus.

Foster Strong Haven, Manasquan, N. J.; College of Physicians and Surgeons, Medical Department of Columbia College, New York, 1886; aged 75; died, March 8, of heart disease.

Oswald F. Henning, Los Angeles; Rush Medical College, Chicago, 1904; served during the World War; aged 55; died, March 19, of peritonitis due to perforating gastric ulcer.

Charles Chittenden Bradley, Dover, Kan.; State University of Iowa College of Medicine, Iowa City, 1890; aged 69; died, February 15, of carcinoma of the esophagus.

Edgar Bentley Noland, Bassetts, Va.; College of Physicians and Surgeons, Baltimore, 1910; served during the World War; aged 44; died, March 2, of angina pectoris.

Charles Nicholas McCuen, Haverhill, Mass.; College of Physicians and Surgeons, Boston, 1902; aged 58; died, March 12, in the Gale Hospital, of bronchopneumonia.

William Edwards, Spring Hope, N. C.; College of Physicians and Surgeons, Baltimore, 1884; aged 69; died, February 14, of cerebral hemorrhage and arteriosclerosis.

Kelso Carmichael Cairns, Swift Current, Sask., Canada; University of Toronto Faculty of Medicine, Toronto, Ont., 1905; aged 51; died recently, of heart disease.

Warren Augustus Bedell, Mount Vernon, N. Y.; University of the City of New York Medical Department, 1879; aged 80; died, March 26, of angina pectoris.

Charles S. Snell, Vermontville, Mich.; Homeopathic Medical College of Missouri, St. Louis, 1875; Civil War veteran; aged 87; died, March 30, of heart disease.

William Edward Hughes, Pocahontas, Ark.; Memphis (Tenn.) Hospital Medical College, 1900; aged 64; died, March 27, of chronic nephritis and uremia.

Robert C. Hitchings, ● Donovan, Ill.; Kentucky School of Medicine, Louisville, 1889; aged 70; died, March 26, in St. Mary's Hospital, Kankakee, of uremia.

Weston Columbus Sumner, Ganado, Texas; University of Louisville (Ky.) School of Medicine, 1909; aged 57; died, March 30, of chronic granular nephritis.

Jim M. Hart, Fort Worth, Texas; Memphis (Tenn.) Hospital Medical College, 1891; aged 77; died, March 27, of bronchopneumonia and heart disease.

Horace Mann Locke, Sturbridge, Mass.; Harvard University Medical School, Boston, 1886; aged 73; died, March 5, of bronchopneumonia and myocarditis.

Charles Carter Shepard, Ord, Neb.; Hahnemann Medical College and Hospital of Philadelphia, 1901; aged 74; died, February 24, of coronary embolism.

Caroline Augusta Latham, Leominster, Mass.; Boston University School of Medicine, 1891; aged 86; died, March 7, of myocarditis and arteriosclerosis.

Jacob A. Haerr, Cincinnati; Pulte Medical College, Cincinnati, 1881; formerly county coroner; aged 81; died suddenly, March 16, of endocarditis.

A. A. Horger, Harleyville, S. C.; Medical College of the State of South Carolina, Charleston, 1895; aged 62; died, March 29, of heart disease.

Henry F. Hewitt, Dunning, Neb.; State University of Iowa College of Medicine, Iowa City, 1897; aged 64; died, March 2, of heart disease.

Butler Ormond Lewis, Wacissa, Fla.; Long Island College Hospital, Brooklyn, 1891; aged 78; died, February 17, as the result of a fractured hip.

Arthur B. Freeman, San Diego, Calif.; Rush Medical College, Chicago, 1885; also a dentist; aged 74; died, January 26, of diabetes mellitus.

Joseph Anton Juen ● Ossian, Iowa; St. Louis College of Physicians and Surgeons, 1904; aged 59; died, March 11, of cerebral hemorrhage.

William H. Stuckenholt, Cleveland; Cleveland Medical College, 1894; also a pharmacist; aged 78; died, March 8, of cerebral hemorrhage.

William Hall, Fort Qu 'Appelle, Sask., Canada; Victoria University Medical Department, Coburg, Ont., 1883; aged 77; died, Dec. 31, 1933.

John Edward Kitchen, Bone Gap, Ill.; Eclectic Medical Institute, Cincinnati, 1877; aged 84; died, February 14, of heart disease.

Edwin S. Naffz, Chicago; Rush Medical College, Chicago, 1893; also a pharmacist; aged 66; died, April 15, of organic heart disease.

William Logan Silcox, Hamilton, Ont., Canada; University of Toronto Faculty of Medicine, 1896; aged 62; died, February 27.

Mary Eliza McKay, Macon, Ga.; Woman's Medical College of Baltimore, 1897; aged 75; died, March 26, of cerebral hemorrhage.

Martin D. Heath, Baldwin Park, Calif.; Pulte Medical College, Cincinnati, 1880; aged 93; died, January 9, of cerebral hemorrhage.

William Crawford, Hamilton, Ont., Canada; University of Toronto Faculty of Medicine, 1892; aged 66; died, February 2.

Daniel Samuel O'Brien, Beloit, Kan.; Rush Medical College, Chicago, 1880; aged 75; died, February 12, of heart disease.

Charles F. Nelms, Laneburg, Ark. (licensed in Arkansas in 1903); aged 62; died, Dec. 25, 1933, of myocarditis.

Correspondence

TINTED LENSES

To the Editor:—In THE JOURNAL, April 14, page 1223, appeared an article by C. H. Coblentz, which should meet with enthusiastic approval. The misinformation he discussed has been allowed to go rampant too long without challenge. It is time for the bunk about tinted lenses to be properly aired.

Except for emergency wear, under extreme light conditions, tinted lenses have no legitimate use. They are distinctly harmful when worn constantly, cultivate an acquired photophobia to normal light, and are then no longer sufficient protection against glare. They are totally unnecessary when the correction is right.

Advertising illustrations usually show the wearer comfortably facing glaring light through tints but carefully avoid suggestion of the reduced vision in ordinary, and especially subdued, light, or of the light sensitiveness that follows.

Perfected lenses are excellent and are worthy of more truth in advertising. Claims are made by the manufacturers that through these lenses marginal vision is as good as the central. This claim is largely false. Marginal vision is obtained by turning the eye in the orbit, the muscle pull alters the shape of the globe, and vision is slightly distorted. Obviously, no lens can possibly allow for such distortion. These lenses are useful in high degrees of error, chiefly because of more perfect vertex refraction. In low errors they are little, if any, better than the standard toric, and certainly not worth the additional cost when price must be considered.

I. W. HAUGHEY, M.D., Fort Collins, Colo.

THE TYPES OF HUMAN HYPERSENSITIVENESS

To the Editor:—In the article by J. A. Rudolph and M. B. Cohen (THE JOURNAL, March 24) the authors distinguish between the reaction in "the artificially sensitized, or anaphylactic man," and "the naturally sensitized man, or man with atopy." They base this distinction primarily on whether or not a history of inheritance can be obtained. The reliance on a negative history as the principal criterion for this distinction is open to criticism because of failure in many cases to obtain satisfactory histories. In my clinical studies on this subject (THE JOURNAL, May 30, 1931, p. 1848; Feb. 6, 1932, p. 446; *Ann. Int. Med.* **7**:1308 [April] 1934), I believe I have clearly demonstrated that the clinical manifestations and the mechanism of these reactions are fully identical whether or not one is dealing with pollen (atopics) or with horse serum (often artificially sensitized) or with any other protein or nonprotein containing antigen.

In the "anaphylactic" man, "the antibody differs from that found in atopy." So far the antibodies in "anaphylactic" and "allergic" shock in men have not been demonstrated. The excellent work of Cooke and Spain, quoted by the authors, includes serum sickness but neither human "allergic" nor "anaphylactic" shock. I have repeatedly tested patients for reagins after "allergic" shock following pollen injections but have never been able to determine these antibodies in the blood soon after shock. Walzer records a similar observation following shock due to an injection of horse serum.

Anaphylactic "sensitivity never produces asthma, hay fever, eczema, urticaria, or other related clinical manifestations of atopy." In the literature, this is a highly controversial question which is not supported by experimental evidence (Ratner, Bret; Jackson, H. C., and Gruehl, Helen L.: Respiratory Anaphylaxis, *Am. J. Dis. Child.* **34**:43 [July] 1927).

The statement that in "anaphylactic" individuals the reactions are less severe, while in atopic ones they may be serious and fatal, is not in accord with clinical observations. In my series of eight deaths following injections of horse serum, which I collected in the state of Michigan, only two gave a previous history of allergy. This would rather indicate that, in fatal cases, "anaphylactic" shock prevails. I have clearly brought out that regardless of whether the sensitized state is acquired or inherited, the severity of a reaction depends primarily on the degree of sensitivity, on the proportion of the overdose to this sensitivity and on the mode and rapidity of absorption (intravenous, backseepage into punctured vein).

Those investigators who share the dualistic conception of atopy and anaphylaxis seem to disregard entirely the fundamental work of Ratner on this subject. The attitude on this question is characteristically expressed by Zinsser, who states in his book (Resistance to Infectious Diseases, ed. 4, New York, Macmillan Company, 1931): "Were it not for *the possibility of confusion in nomenclature* [italics mine] we would change this heading [human idiosyncrasies, atopy, allergy] to 'human anaphylaxis,' believing that these conditions in man are based on an immunological mechanism basically identical with anaphylaxis in animals, superficially modified by human anatomical conditions." This matter, I believe, is of more than academic interest because of its bearing on sudden, heretofore unexplained death (*Am. J. Dis. Child.* **47**:41 [Jan.] 1934).

GEORGE L. WALDBOTT, M.D., Detroit.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

STATISTICAL DATA IN HUMAN ANATOMY

To the Editor:—In our daily newspaper (Grand Rapids *Press*) an item caught my eye in the section on "This Curious World." The statement is made that "the blood vessels of an adult have a combined length of about 100,000 miles." May I ask you whether this statement has the backing of scientific authority. For a long time I have wanted to know whether any estimates have ever been made of the combined length of nerves of the body and of the blood vessels. Also whether the total number of white and red corpuscles has ever been estimated. These figures would be of interest in talks to the public which I sometimes give. If there is any publication you recommend along this line, I will be grateful.

A. W. WOODBURNE, M.D., Hastings, Mich.

ANSWER.—Estimates of the total length of blood vessels in the adult human body would necessarily be only approximate. Krogh, in his book on the capillaries, has made a calculation of the total length of blood capillaries in the muscles. He states that there are more than 100,000 kilometers of capillaries in the muscles alone (62,000 miles). Since the muscles constitute only about 40 per cent of the weight of an adult healthy body, it would be conservative to estimate the total length of all capillaries in the rest of the body at 38,000 miles. Therefore, the statement that there are more than 100,000 miles of blood capillaries seems to be conservative.

No estimates of the total length of nerve fibers in the human body seem to have been made, but several estimates have been made of their number. Vierordt estimates the number of nerve fibers in the spinal nerve trunks at over 800,000, the number of fibers in the cranial nerves from the third to the twelfth, inclusive, at 200,000 (Krause's Anatomie). The number of fibers in the optic nerve have recently been counted by Arey (1934); the two (right and left) together in the human adult contain about 2,600,000. This gives a total of 3,600,000 fibers without the olfactory nerves. These figures are undoubtedly far too small, because the older counts were made by methods that did not permit observation of the finer fibers. Since many of these nerve fibers branch repeatedly toward their termination, the number of fibers in the nerve trunk would be only a fraction of the total number of nerve fibers in the periphery.

The number of red corpuscles in the body has been estimated at twenty-three million million (Vierordt). The proportion of white blood cells to red cells is about 1 to 666, so that the blood contains only about thirty-three thousand million white cells.

A good reference book for statistics of this kind is Vierordt's Anatomische, physiologische und physikalische Daten und Tabellen, Jena, Gustav Fischer, 1906. A considerable amount of such information is contained in Harvey's Simple Lessons in Human Anatomy, Chicago, American Medical Association, 1931.

CLIMATIC RECOMMENDATIONS IN SINUS INFECTION

To the Editor:—Given chronic sinusitis (probably streptococcic) with rheumatoid arthritis, together with intermittent low grade fever and tachycardia but no endocarditis in a man, aged 39, otherwise in good health, with arthritis of two years' duration and the tonsils removed, is change of climate or operation better to effect a cure of the sinusitis? Would operation be contraindicated because of an occasional bout of fever? Nose and throat specialists seem very much confused about chronic sinusitis and its treatment. If pus is not found at the time of examination in the sinuses they doubt whether infection is present. However, I think that, if the nose feels stuffy most of the time, if the mucosae of the sinuses are thickened, if mucous cysts are present, if the nose stops up at night and the throat becomes irritated by discharge or by cold air not adequately warmed and humidified by passing through the sinuses, and if a mucoid or mucopurulent discharge, sometimes containing a little blood, is present especially on awakening in the morning, one can be assured that he is suffering from chronic sinusitis and all the more certain if systemic infection is present. Please omit name.

M.D., Illinois.

ANSWER.—Rheumatoid arthritis with a low grade fever in a patient between 20 and 40 is usually associated with a septic focus. In such cases there is a tendency to rapid pulse with low blood pressure. Fever is no contraindication to operation. The absence of pus in the sinuses at the time of examination is no indication that infection is not present. In such cases it is not unusual to find a thickened and infected membrane, nasopharyngeal inflammation and mucopurulent discharge with blockage of the nose. Removal of foci of infection is generally regarded as a first consideration, not at all an easy matter in nasal sinus disease. If the patient is so circumstanced that he can live in a suitable climate, operative treatment could be limited at first to securing adequate drainage. Following this, favorable hygenic surroundings, including fresh air and sunshine, constitute an important factor in recovery.

TREATMENT OF SYPHILIS

To the Editor:—March 1, 1933, a couple, aged 25 and 23, with secondary syphilis, consulted me. The husband stated that he had a chancre two and one-half months prior to the appearance of the rash. A Kahn test was made on both of them; the report was 2 plus on him and 3 plus on her. Each of them received twelve injections of sulpharsphenamine intramuscularly, in a dosage of 0.6 Gm., at intervals of seven days, and 1 drachm (4 Gm.) of a 50 per cent mercurial ointment daily, six days out of seven. They became symptomless and felt normal. I discontinued treatment for six weeks and took another Kahn test, which was reported negative for both of them. I prolonged the rest period for an additional two months and took another Kahn test and that one also was negative. I prolonged their rest period for four more months and then the Kahn test showed a 3 plus for both of them. Kindly advise me how and for how long to treat them in order to bring about a cure.

M.D., Illinois.

ANSWER.—The mode of procedure outlined in this question is a classic example of what not to do for a patient with early syphilis. The most recent investigation by the Clinical Cooperative Group and the United States Public Health Service indicates that the principal source of serologic irreversibility and relapse, together with neurorecurrence, is the introduction of rest intervals into the first eighteen months of treatment for early syphilis. During this period, patients should be continuously under treatment with either an effective arsphenamine or a heavy metal, such as bismuth, or both. The practice of depending on serologic tests for the cessation or continuance of treatment in early syphilis is pernicious and certain to result in prolonged infectivity and therapeutically unmanageable cases. Such patients should be treated by a scheduled system that will give them approximately forty injections of either arsphenamine or neoarsphenamine and not less than five ten-injection courses of an effective bismuth preparation, such as bismuth salicylate, during the eighteen months period of treatment. The serologic tests of course should be taken periodically, but their reversal to negative should not be taken as a signal for the cessation of treatment. Regardless of the schedule mentioned, treatment should be continued for one year after all symptoms and signs of the disease have disappeared, including the finding of a completely negative spinal fluid examination. It should

be mentioned, moreover, in connection with this question, that sulpharsphenamine is not a satisfactory drug for the treatment of adult syphilis, on account of the high incidence of dermatic and purpuric hemorrhagic reactions.

If the two patients mentioned in the foregoing question are simply positive on the blood and negative on the spinal fluid at this time, an effort should be made to complete the type of treatment, continuous in schedule, which has just been described. The probabilities are that it will be very difficult to reverse the blood serologic tests to negative, and these patients may easily join the category of Wassermann-fast syphilis. Under no circumstances should they be dismissed from observation over a period of years, and the possibility of pregnancy in the woman should be controlled and treatment administered during the pregnancy in order to prevent the birth of a syphilitic child.

INJECTION OF VARICOSE VEIN AND TREATMENT OF PHLEBITIS

To the Editor:—A woman, aged 41, with three children, aged 19, 17 and 14 years, had varicose veins and phlebitis developing after the birth of the second child seventeen years ago. She had attacks of phlebitis again four and two years ago. She had a fourth attack lately and is just getting over it. She is otherwise in good health. Her blood pressure has always been normally rather low—systolic 100, diastolic 45. There are moderate varicosities of the saphenous vein in the upper third of the calf. It has given little or no trouble at other times. I have not dared to inject anything into the vein on account of the recurring phlebitis. Do you think injection treatment will be advisable and, if so, how long after the last attack? Would you advise ligation of the saphenous vein or excision to prevent the danger of embolism? How great is the danger of embolism in a case of recurrent phlebitis? Or would you advise to leave well enough alone, the patient being rather well and just out of bed now. Please omit name.

M.D., New Jersey.

ANSWER.—The mere fact that a patient has had phlebitis is not a contraindication to the injection treatment of varicose veins. Her low blood pressure is not a contraindication. The recent attack of phlebitis may be an entirely separate attack and in no way related. They are entirely separate infections and not a flare up of a latent infection. One might wait at least three months before starting the injection treatment and using the electric baker and hot packs alternately a great deal of the time. Ligation should be done in the foramen ovale and the distal saphenous vein injected at the same time. A supportive bandage should be kept on the lower leg for several days following and then those veins should be injected at one sitting. One need not worry about the danger of an embolus in this case.

REACTIONS AFTER ARSPHENAMINE

To the Editor:—During the last six months a number of patients who have been receiving neoarsphenamine have developed reactions. These reactions are of the delayed type, occurring from one to four hours after the treatment, and consist of severe chills, body pains, prostration and sometimes nausea or vomiting. The reactions are somewhat similar to those seen following the first one or two injections of neoarsphenamine when the patient is started on treatment in the secondary stage. The reactions in question have occurred in patients who are receiving their second or third courses of neoarsphenamine and who previously had no trouble following their injections. My maximum dosage is 0.6 Gm. and these reactions frequently follow smaller amounts, such as 0.3 or 0.45 Gm. These reactions have lately been occurring in about 20 per cent of the cases under treatment. I have been using D. R. L. neoarsphenamine and have lately changed to Squibb's neoarsphenamine without noticing any particular lessening of the reactions. Some of these patients are able to tolerate Searle's neoarsphenamine, which, I am informed, does not contain the methyl radical. Can you inform me as to the probable cause of these reactions? While I have always had an occasional patient exhibit hypersensitiveness to this drug, I have never before had such a high percentage of reactions. The neoarsphenamine is injected intravenously according to the accepted technic, the powder being dissolved in double distilled water and the injection being given very slowly. These patients show no evidence of dermatitis and apparently are able to tolerate an indefinite number of the injections if they are willing to put up with these unpleasant reactions. Different samples of the drug from different batches apparently produce the same effect, but the reaction is less with the smaller dosages. Kindly omit name and address.

M.D., Ohio.

ANSWER.—Reactions of the type described, which do not disappear when the brand of neoarsphenamine is changed, suggest the following possibilities:

There may be a technical error in the mixing of the drug. This includes a wide range of possibilities, such as contaminated solution, aeration of the drug in mixing, undue agitation, and glassware not completely cleaned so as to remove all oxidation products of the drug before the next injection is given. Such difficulties creep in when technicians are employed in an office or a clinic, and a change from a more experienced to a less experienced person takes place.

While the rate of injection may also be a factor, rapid injection of the arsphenamines is more prone to give rise to acute vascular reactions following immediately on the injections than to delayed reactions, with chill, fever and gastro-intestinal symptoms.

It must also be considered that there are unaccountable factors in the reactivity of groups of patients from year to year and from season to season and that anxiety factors, poor nutrition, a high carbohydrate intake, and the like, are prone to increase the incidence of reaction and reduce the tolerance of large groups of persons receiving treatment for syphilis. Neglect of instructions regarding light meals just before and for twenty-four hours after treatment may at times be responsible for gastro-intestinal reactions.

As a suggestion for dealing with the situation, the neoarsphenamine, following the recommendation of Colonel Harrison and others, might be made up in 10 cc. of a 10 per cent sterile solution of calcium gluconate, which can be obtained in ampule form from the larger pharmaceutical manufacturers. This is said by various observers to reduce materially the incidence of gastro-intestinal reactions. Again, it is important to emphasize that the drug must be given at an extremely slow rate.

DANGERS OF COMMON DRINKING CUP

To the Editor:—From a sanitary standpoint I am anxious to know your opinion regarding the use of a public sacrament cup in taking communion. I have given information to a minister who advanced the argument that there is a sufficient amount of alcohol in the wine to act as an antiseptic or protective agency. Not knowing the percentage of alcohol, I doubted this statement and am writing you for further information. Kindly omit name.

M.D., Nebraska.

ANSWER.—The same objections apply to the use of a public communion cup as apply to the use of any common drinking cup. There is no reason to believe that any amount of alcohol present in the wine would act as a protective agent. The percentage of alcohol is too small to expect much germicidal action, the time of exposure is too short, and only part of the contaminated area of the cup would be touched by the wine.

DIAGNOSIS OF UNDULANT FEVER

To the Editor:—In making a diagnosis of undulant fever in patients who show the clinical symptoms suggesting the disease, I should like to know how high the titer must be in the serologic test before the diagnosis can be safely made. Please omit name and address.

M.D., New York.

ANSWER.—Diagnostic significance is usually attributed to agglutination in dilutions of 1:80 or above. It cannot be said, however, that there is any arbitrary diagnostic agglutination titer. While the serums of most individuals who exhibit a more or less well defined clinical picture of undulant fever will show agglutination in titers of 1:80 or above, occasional cases will be encountered in which no agglutinins are present or agglutinins will exist in titers of from 1:10 to 1:40. Ordinarily, serum agglutinins do not appear until a week or ten days after the onset of illness. In some cases, however, agglutinins may not appear for several weeks. The titer reaches varying heights during the acute course of the disease and tends to fall as the fever abates. Agglutination in dilutions of 1:160 to 1:1,280 will usually be found during the fourth or fifth week of illness. Many persons will retain antiabortus serum agglutinins for many months or years, while in other cases they will entirely disappear a few months after recovery.

About 5 per cent of individuals with undulant fever, including those from whom the organism has been recovered from blood culture, will fail to develop antiabortus agglutinins. In occasional instances, agglutination in titers below 1:80 will be encountered in persons from whose blood Alcaligenes organisms have been recovered. In cases in which the clinical manifestations are strongly suggestive of undulant fever, the absence of agglutinins or the presence of agglutinins in titers of 1:10 to 1:40 should stimulate further serologic and bacteriologic studies. The skin test is of value in differentiating cases in which agglutinins are absent or are present in low titer. If the agglutination test is repeatedly negative and if the skin test is negative, it is quite probable that the patient does not have undulant fever. One method of carrying out the skin test is by the intradermal injection of 0.1 cc. of saline suspension of heat-killed or formaldehyde-killed abortus organisms, adjusted to a standard of two billion organisms per cubic centimeter. The Alcaligenes (Brucella) melitensis (abortus) vaccine, which is available through trade sources, may be used for the skin test. A positive test is characterized by the gradual development, usually within from twenty-four to forty-eight hours

after injection, of an indurated reddish area, usually about 2 to 4 cm. in diameter. The induration usually persists for many days or weeks.

Carpenter and others have demonstrated that antiabortus agglutinins develop only when there has been actual invasion of the tissues by living Alcaligenes organisms. Subclinical Alcaligenes infections have occurred in some persons who have been exposed to the disease; antiabortus agglutinins have been demonstrated in the serums of such persons in the absence of clinical signs or symptoms of undulant fever.

PROFUSE PERSPIRATION AS SIGN OF GLANDULAR DISTURBANCE

To the Editor:—A white woman, aged 40, some weeks ago had a moderately severe bronchitis and coryza. She is nervous and quite obese, weighing about 200 pounds (90 Kg.). Under ordinary treatment she has recovered from the respiratory infection, but now she complains bitterly about profuse sweats, which come on mostly at night when she is asleep. When she goes to bed she feels well, but at about 1 or 2 o'clock she is awakened from sleep by a profuse sweat, which lasts until about 4 o'clock, when she falls asleep and does not sweat any more until the next day, when she has periodic sweats. Sweating during the day is not apparently brought on by nervousness, but when she begins to sweat she becomes nervous. She does not drink an abnormal amount of water and her appetite is normal. She also says that her voice becomes hoarse toward evening, even though she does not use it during the day for long periods. Atropine seems to make the patient worse, because it produces marked nervous symptoms. Her temperature is normal and she has no evidences of tuberculosis. The blood pressure is 130 systolic, 70 diastolic. The pulse rate is 96. Her obesity is probably due to hypopituitarism. I have questioned her thoroughly with special reference to weakness, nervousness and hunger, but these symptoms are not present. There seems to be some abnormality of the nervous control of the sweat glands. Do you believe that pituitary gland therapy would help? If so, what preparation and what dose would you suggest? I would appreciate any therapeutic suggestion that you will make. Please omit name.

M.D., Ohio.

ANSWER.—The analysis of this report suggests that the sweating is a complication of the acute respiratory infection from which the patient has just recovered. This is not an unusual phenomenon and usually will disappear after the lapse of a little more time. If the symptoms were due to the glandular disturbance it is rather difficult to understand why they should not have come on until after the respiratory infection. On the other hand, there are numerous instances of glandular unbalance in which sweating is a pronounced and marked symptom. Such an instance is seen in the menopause. Therapy is usually difficult; the various endocrine products may be used more or less experimentally.

TYPHOID DEATHS IN CHICAGO

To the Editor:—What year before the drainage canal was in use did Chicago have the greatest number of deaths from typhoid? How many deaths were reported? How many infections were reported and what was the population that year? What year after the drainage canal was in use did Chicago have the fewest deaths from typhoid? How many infections were reported? What was the population that year? I am writing a paper for a public health talk at a church and would appreciate anything that you can give me on the effect of sanitation in lowering the death rate and the disease rate from typhoid or any other disease.

G. E. HENSCHEN, M.D., Sherman, Texas.

ANSWER.—The largest number of deaths from typhoid ever recorded in Chicago was in 1891, when 1,997 deaths from this cause were reported. The estimated population in that year was 1,148,710, making a typhoid death rate of 173.8 per hundred thousand inhabitants. This contrasts with average typhoid death rates in later years as follows:

	Typhoid Death Rate per 100,000
1906-1910	15.8
1911-1915	8.2
1916-1920	2.4
1921-1925	1.4
1926-1930	0.6
1931	0.6
1932	0.4
1933	0.4

The population of Chicago was about three times as large in 1933 as it was in 1891, so that if the same rate had obtained in 1933 as in the earlier year there would have been nearly 6,000 deaths from typhoid, whereas there were actually 12. The number of deaths is considered a better measure of the prevalence of typhoid than the number of cases reported. In general, there are approximately ten to fifteen cases for each death.

Much information on the effect of sanitation in lowering death rates will be found in the files of THE JOURNAL and the *American Journal of Public Health*, as well as in modern books on hygiene.

Council on Medical Education and Hospitals

COMING EXAMINATIONS

AMERICAN BOARD OF DERMATOLOGY AND SYPHILOLOGY: *Oral.* Cleveland, June 11-12. Sec., Dr. C. Guy Lane, 416 Marlboro St., Boston.

AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY: *Oral* (all candidates), Cleveland, June 12. Sec., Dr. Paul Titus, 1015 Highland Bldg., Pittsburgh.

AMERICAN BOARD OF OPHTHALMOLOGY: Cleveland, June 17 and Butte, Mont., July 16. *Application must be filed at least 60 days prior to date of examination.* Sec., Dr. William H. Wilder, 122 S. Michigan Blvd., Chicago.

AMERICAN BOARD OF OTOLARYNGOLOGY: Cleveland, June 11. Sec., Dr. W. P. Wherry, 1500 Medical Arts Bldg., Omaha.

ARIZONA: *Basic Science.* Tucson, June 19. Sec., Board of Basic Examiners, Dr. Robert L. Nugent, University of Arizona, Tucson.

ARKANSAS: Little Rock, May 15-16. Sec., Dr. A. S. Buchanan, Prescott.

CALIFORNIA: *Reciprocity.* San Francisco, May 16. Sec., Dr. Charles B. Pinkham, 420 State Office Bldg., Sacramento.

CONNECTICUT: Basic Science. New Haven, June 9. *Prerequisite to license examination.* Address, State Board of Healing Arts, 1895 Yale Station, New Haven.

DELAWARE: Wilmington, June 12-14. Sec., Medical Council of Delaware, Dr. Harold L. Springer, 1013 Washington St., Wilmington.

FLORIDA: Jacksonville, June 11-12. Sec., Dr. William M. Rowlett, Box 786, Tampa.

INDIANA: Indianapolis, June 19-21. Sec., Board of Medical Registration and Examination, Dr. William R. Davidson, Room 5, State House Annex, Indianapolis.

IOWA: Iowa City, June 5-7. Dir., Division of Licensure and Registration, Mr. H. W. Grefe, Capitol Bldg., Des Moines.

KANSAS: Topeka, June 19-20. Sec., Board of Medical Registration and Examination, Dr. C. H. Ewing, Larned.

KENTUCKY: Louisville, June 6-8. Sec., State Board of Health, Dr. A. T. McCormack, 532 W. Main St., Louisville.

MARYLAND: *Homeopathic.* Baltimore, June 12-13. Sec., Dr. John A. Evans, 612 W. 40th St., Baltimore. *Regular.* Baltimore, June 19-22. Sec., Dr. Henry M. Fitzhugh, 1211 Cathedral St., Baltimore.

MISSISSIPPI: Jackson, June 26-27. Sec., State Board of Health, Dr. Felix J. Underwood, Jackson.

MISSOURI: St. Louis, June 14-16. State Health Commissioner, Dr. E. T. McGaugh, State Capitol Bldg., Jefferson City.

NATIONAL BOARD OF MEDICAL EXAMINERS: The examinations in Parts I and II will be held at centers in the United States where there are five or more candidates, June 25-27 and Sept. 12-14. Ex. Sec., Mr. Everett S. Elwood, 225 S. 15th St., Philadelphia.

NEBRASKA: Omaha, June 8-9. *Application must be filed at least fifteen days prior to date of examination.* Dir., Bureau of Examining Boards, Mrs. Clark Perkins, State House, Lincoln.

NEW JERSEY: Trenton, June 19-20. Sec., Dr. James J. McGuire, 28 W. State St., Trenton.

NEW YORK: June 25-28. Chief, Professional Examinations Bureau, Mr. Herbert J. Hamilton, Room 315 Education Bldg., Albany.

NORTH CAROLINA: Raleigh, June 18. Sec., Dr. B. J. Lawrence, 503 Professional Bldg., Raleigh.

OHIO: Columbus, June 5-8. Sec., Dr. H. M. Platter, 21 W. Broad St., Columbus.

OKLAHOMA: Oklahoma City, June 6-7. Sec., Dr. J. M. Byrum, Mammoth Bldg., Shawnee.

OREGON: *Basic Science.* Portland, May 19. Acting Sec., State Board of Higher Education, Mr. Charles D. Byrne, Eugene.

SOUTH CAROLINA: Columbia, June 26. Sec., Dr. A. Earle Boozer, 505 Saluda Ave., Columbia.

TENNESSEE: Knoxville, Memphis, and Nashville, June 14-15. Sec., Dr. H. W. Qualls, 130 Madison Ave., Memphis.

TEXAS: Fort Worth, June 21-23. Sec., Dr. T. J. Crowe, 918-19-20 Mercantile Bank Bldg., Dallas.

UTAH: Salt Lake City, June 27-29. Dir., Department of Registration, Mr. S. W. Golding, 326 State Capitol Bldg., Salt Lake City.

VERMONT: Burlington, June 20-22. Sec., Board of Medical Registration, Dr. W. Scott Nay, Underhill.

VIRGINIA: Richmond, June 20-22. Sec., Dr. J. W. Preston, 2815 Franklin Road, Roanoke.

WYOMING: Cheyenne, June 4. Sec., Dr. W. H. Hassed, Capitol Bldg., Cheyenne.

Ohio Reciprocity and Endorsement Report

Dr. H. M. Platter, secretary, Ohio State Medical Board, reports 26 physicians licensed by reciprocity and 3 by endorsement at a meeting held, Jan. 9, 1934. The following schools were represented:

School	LICENSED BY RECIPROCITY Year Grad.	Reciprocity with
Georgetown University School of Medicine	(1926)	Michigan
Emory University School of Medicine	(1932)	W. Virginia
Chicago College of Medicine and Surgery	(1917)	Illinois
Loyola University School of Medicine	(1932, 2)	Illinois
Northwestern University Medical School	(1933)	Michigan
Rush Medical College	(1893)	Wisconsin
Indiana University School of Medicine	(1930), (1932)	Indiana
University of Kansas School of Medicine	(1932)	Kansas
University of Louisville School of Medicine	(1930), (1931)	Kentucky
Johns Hopkins University School of Medicine	(1931)	Maryland
University of Michigan Medical School	(1931), (1932)	Michigan
Creighton University School of Medicine	(1930)	Kansas
Cornell University Medical College	(1931)	New York

Long Island College of Medicine	(1930)	New Jersey
Hahnemann Medical College and Hospital of Philadephia	(1909), (1931)	Penna.
University of Pennsylvania School of Medicine	(1929), (1932)	Penna.
Meharry Medical College	(1932)	Georgia
University of Tennessee College of Medicine	(1931)	Tennessee
University of Texas School of Medicine	(1929)	Texas
Universität Leipzig Medizinische Fakultät	(1926)	W. Virginia

LICENSED BY ENDORSEMENT

School	Year Grad.	Endorsement of
Loyola University School of Medicine	(1933)	N. B. M. Ex.
University of Michigan Medical School	(1918)	N. B. M. Ex.
Columbia Univ. College of Physicians and Surgeons	(1927)	N. B. M. Ex.

North Dakota January Report

Dr. G. M. Williamson, secretary, North Dakota State Board of Medical Examiners, reports the oral, written and practical examination held in Grand Forks, Jan. 2-5, 1934. The examination covered 13 subjects and included 100 questions. An average of 75 per cent was required to pass. Three candidates were examined, 2 of whom passed and 1 failed. One physician was licensed by reciprocity and 3 physicians were licensed by endorsement. The following schools were represented:

PASSED

School	Year Grad.	Per Cent
University of Minnesota Medical School	(1932) 78.5, (1933)	80.5

FAILED

School	Year Grad.	Per Cent
University of Minnesota Medical School	(1930)	72

LICENSED BY RECIPROCITY

School	Year Grad.	Reciprocity with
New York Univ., Univ. and Bellevue Hosp. Med. Col.	(1931)	New Jersey

LICENSED BY ENDORSEMENT

School	Year Grad.	Endorsement of
College of Medical Evangelists	(1931)	N. B. M. Ex.
Northwestern University Medical School	(1933)	N. B. M. Ex.
Rush Medical College	(1932)	N. B. M. Ex.

Georgia Reciprocity and Endorsement Report

Mr. R. C. Coleman, joint secretary, State Examining Boards, reports 1 physician licensed by reciprocity and 2 physicians licensed by endorsement from Jan. 1 to Jan. 5, 1934. The following schools were represented:

LICENSED BY RECIPROCITY

School	Year Grad.	Reciprocity with
University of Tennessee College of Medicine	(1931)	Tennessee

LICENSED BY ENDORSEMENT

School	Year Grad.	Endorsement of
George Washington University School of Medicine	(1928)	N. B. M. Ex.
Columbia Univ. College of Physicians and Surgeons	(1929)	N. B. M. Ex.

Book Notices

Treatment in General Practice. By Harry Beckman, M.D., Professor of Pharmacology at Marquette University, School of Medicine, Milwaukee. Second edition. Cloth. Price, $10. Pp. 889, with illustrations. Philadelphia & London: W. B. Saunders Company, 1934.

In revising this new edition of his popular book, Dr. Beckman has been particularly concerned with two objectives—the elimination of unestablished and discarded methods and the addition of well established new methods. He lists as certain entities not previously included acetylsalicylic acid (aspirin) poisoning; agranulocytosis; blackwater fever; bronchomycosis; cyanide poisoning; erysipeloid; food allergy; gasoline and kerosene poisoning; hiccup; hyperinsulinism (hypoglycemia) and dysinsulinism; hypothyroidism without myxedema; lead poisoning; lymphogranuloma inguinale (climatic bubo); malnutrition; methyl chloride poisoning; onchocerciasis; oriental sore, dermal and mucocutaneous leishmaniasis; prophylaxis of gonorrhea in the female; serum sensitization and desensitization; simple achlorhydric anemia; strongyloides infection; tear gas burns; tetany; varicose ulcer, and a section on vehicles and incompatibilities. This volume established itself promptly as a practical work in therapeutics. The revision of the book has increased its merit. One finds the section on the treatment of amebic dysentery quite abreast of the time and in accord with the new literature developed as a result of the recent Chicago outbreak. In the treatment of the common cold, which the author discusses under the title of "catarrhal fever," he mentions all the time-tried empirically tested remedies that are available. He does not hesitate to mention proprietary products, although he limits himself in the majority of instances to those which have been credited by New and Nonofficial Remedies. Indeed, he quotes this work repeatedly in his discussions of new remedies. In many instances almost the whole of certain discussions is direct quotation from published literature, most of it from THE JOURNAL. The volume is an excellent compilation in which the author has chosen with good judgment and in which he does not hesitate to criticize on the basis of his own practical experience.

Hypertension and Nephritis. By Arthur M. Fishberg, M.D., Associate Physician to Beth Israel Hospital, New York City. Third edition. Cloth. Price, $6.50. Pp. 668, with 40 illustrations. Philadelphia: Lea & Febiger, 1934.

Perhaps no textbook on these complicated and controversial subjects has been so favorably received by the profession as the work of this author. The book is now in its third edition, although the original edition was available only a few years ago. Facts on both subjects, ordinarily difficult of correlation, are integrated in such a well organized manner that the reader is able for the first time to get a clear understanding of the symptom complex. This is a most important contribution, since the vast majority of patients who suffer from hypertensive and renal diseases are cared for by those in general practice. Almost every chapter in this edition has undergone revision. Some of the discussions that have been added since the last edition are those on the nature and treatment of renal and hypertensive disease in pregnancy, allergy and hypertension, the use of acacia in edema, the therapeutic use of magnesium sulphate and salyrgan, and renal lesions accompanying various forms of endocarditis. This book is invaluable to those engaged in the practice of medicine, as it represents one of the most comprehensive works on the subject. It is written from the point of view of clinical medicine and serves as well at the bedside as in the library.

Essentials of Hospital Practice: A Guide for Students and Interns. By Royal M. Calder, M.D., Instructor in Medicine, Duke University School of Medicine, Durham, North Carolina. With a section on Surgical Methods, By C. E. Gardner, Jr., M.D., Assistant Professor of Surgery, Duke University School of Medicine. Fabrikoid. Price, $2.75. Pp. 262, with 9 illustrations. Durham: Duke University Press, 1934.

About a year ago the American Medical Association published a handbook for interns. Jointly prepared by the Council on Pharmacy and Chemistry and the Council on Medical Education and Hospitals, it was almost entirely devoted to improving the character of hospital prescribing by encouraging interns, at the outset of responsible practice, to continue the use of rational therapeutics as they had been taught in medical school. Some ready reference data were included. In Calder's book, a list of drugs is included but as only one of a number of important aspects of hospital treatment. Treating the subject quite extensively, he divides his material about evenly between physical and laboratory diagnostic methods and routine and emergency treatments of medical and surgical patients. This handbook should be an excellent investment, as much on the basis of continuing usefulness as the filling of an immediate need. The complete index and convenient pocket size are attractive features.

Die Digitalisbehandlung. Von Prof. Dr. Ernst Edens. Second edition. Paper. Price, 7 marks. Pp. 154, with 80 illustrations. Berlin & Vienna: Urban & Schwarzenberg, 1934.

This volume on digitalis therapy is an instructive and useful work, well arranged and well written. It is particularly prepared for the clinical worker and gives a satisfactory summary of the experimental work. Examples of the laboratory and clinical observations in this work are the following conclusions found in the first and in the next to the last chapter:

Chapter I. "In frog's hearts, digitalis has shown a systolic and a diastolic effect in nontoxic doses. I. Systolic effect: 1. The systolic tension and shortening of the muscle fibers is quickened. 2. The systolic shortening of the muscle fibers is increased. II. Diastolic effect: 1. The duration of diastole is lengthened. 2. The diastolic relaxation of the muscle fibers is increased and diastole deepened (?) . . . The heart in warm blooded animals observed mechanically shows the same

effect from digitalis as does the frog's heart. It pulls itself together in systole more rapidly and forcefully. It dilates in diastole for a longer time and perhaps also in a greater degree, but now follows an important difference, the lengthening of diastole and the slowing of the pulse that is associated with it occur in pronounced form only if the heart is connected through its vagus nerves to the central nervous system. . . . We must conclude from this (1) that the pulse slowing in warm blooded animals in the main depends on stimulation of the vagus center and (2) that the peripheral digitalis effect in warm blooded animals works in some other way than in the case of the cold blooded animals."

Chapter X. "The effective strength of a preparation of digitalis for man must be determined on man himself. . . . The effectiveness of different digitalis preparations should never be determined through the comparison of their effects in different patients, but only through their comparison in the same patient. . . . For the test of effectiveness of digitalis preparations, such cases are most suitable in which the evident systolic effect of digitalis can be measured; that is, cases of heart weakness with evidences of stasis which afford an opportunity for definite measurements. . . . Every sick heart has its own digitalis dosage."

The Lyophilic Colloids (Their Theory and Practice). By Martin H. Fischer, Professor of Physiology in the University of Cincinnati, and Marian O. Hooker, Research Associate in Physiology in the University of Cincinnati. Cloth. Price, $4.50. Pp. 246, with 84 illustrations. Springfield, Ill., & Baltimore, Md.: Charles C. Thomas, 1933.

This book is not, as one might judge from its title, a general treatise on the lyophilic colloids. It is concerned entirely with work done by the authors during the last fifteen years on certain types of colloid systems. The book is divided into three parts. The first part, which occupies about two thirds of the book, is on the general nature of the lyophilic colloids. In this part the authors present the results of their work on phenol/water, soap/water, gelatin/water and casein/water systems and develop their thesis that the behavior of such systems indicates that they are not solutions of X in water, but of water in X. The second part deals with chemical applications and the final one with biologic applications. The last section, especially, contains numerous statements which are in direct conflict with all accepted views in this field. This book is interesting mainly because it presents a summary of the work and views of the authors. As a presentation of modern concepts concerning the colloidal nature of protein solutions, it would seem to be inadequate. There are no references to work of such men as Sørensen, Svedberg or Kruyt, who have carried out extensive physicochemical and colloidal studies on proteins, and the latest reference to Pauli is twenty years old. It is too restricted in its point of view to give the reader a satisfactory picture of the theory and practice of lyophilic colloids.

Lettsom: His Life, Times, Friends and Descendants. By James Johnston Abraham. Cloth. Price, 30/-. Pp. 498, with 145 illustrations. London: William Heinemann, Ltd., 1933.

> When any sick to me apply,
> I physics, bleeds and sweats 'em,
> If after that they choose to die,
> Why Verily!
>
> J. Lettsom.

The fame of this couplet is world wide, and any psychologist might from it alone have much to say about the character of its author. The Quaker physician concerned was a philanthropist and a man of letters who met every one worth meeting in the London of his time, a man who was equally at home in the presence of the king and among the sick in the city prison. His time was that of Hogarth, Dick Turpin, Fothergill, William Cullen, Benjamin Franklin, John Graham the charlatan, Dr. Johnson, Edward Jenner and many others. In this atmosphere Lettsom was active as a medical practitioner, an investigator and a citizen. He founded a medical society, wrote many books on medical subjects, led the campaign for prison reform, founded a convalescent hospital at the seashore, aided Edward Jenner in his campaign for vaccination, and eventually died from a streptococcic infection sustained during a postmortem examination. Lettsom is particularly interesting to Americans because he was himself born in the West Indies and because he was constantly in communication with Benjamin Rush, Benjamin Waterhouse and Benjamin Franklin, all great names in the development of American science. This volume is one of the most fascinating medical biographies thus far available. It is full of anecdotes and personal correspondence and gives a fine picture of an eighteenth century physician who endeavored to fill to repleteness the various capacities in which physicians may serve the public. The book is beautifully illustrated with innumerable portraits and facsimiles of documents of historical interest.

Starling's Principles of Human Physiology. Edited and revised by C. Lovatt Evans, D.Sc., F.R.C.P., Jodrell Professor of Physiology in University College, London. The chapters on the Central Nervous System and Sense Organs revised by H. Hartridge, M.A., M.D., Sc.D., F.R.S., Professor of Physiology at St. Bartholomew's Medical College. Sixth edition. Cloth. Price, $8.75. Pp. 1122, with 562 illustrations. Philadelphia: Lea & Febiger, 1933.

In the twenty-two years since the first edition of this physiology became available there have been six editions and a Spanish translation. This should be sufficient testimony to the merit of the work and to its appreciation by teachers in this field. In the present edition there have been extensive alterations and rewritings in order to bring the work down to date. The chapters on the circulation, nervous system and sense organs have been revised by Professor Hartridge. A few references have been added to the work in order to provide the reader with modern bibliographic material. Dr. Evans points out that at least 4,000 papers on physiology are published each year. It would no doubt be simple to point out the failures of the work in regard to certain modern types of investigation. In the section on sleep, for example, there are no references to the recent American investigations on the depth and intensity of sleep or to the use of modern electrical recording devices and motion picture apparatus for such studies. In the section on the blood the suggestion is offered that the blood platelets may be artefacts, yet a few pages farther on there is a serious discussion of their part in blood coagulation. On the whole, however, the work is highly competent, complete and probably as safe a work in the field it concerns as any now available.

Obstetrics and Gynecology. Edited by Arthur Hale Curtis, M.D., Professor and Head of the Department of Obstetrics and Gynecology, Northwestern University Medical School. Volume III and General Index to Volumes I to III. Cloth. Price, $35 per set. Pp. 1201, with 570 illustrations; Pp. 137. Philadelphia & London: W. B. Saunders Company, 1933.

The third volume of this notable system of gynecology and obstetrics is well up to the standard of the previous two volumes. Here the sections included are on displacement and relaxations, disturbances of function, the endocrines in gynecology and obstetrics, special diseases and important symptom complexes, other gynecologic diseases and symptom complexes, and special topics. The final section is for the general reader one of the most valuable in the entire work. It includes not only an outline of the methods of examination but also the application of the x-rays, blood transfusion, anesthesia and operative management and the relation of obstetrics and gynecology to other branches of medical science. This volume, like the others, is extensively and beautifully illustrated, and there is an adequate index.

La cura specifica della brucellosi. Da Prof. G. di Guglielmo, et al. Società medicochirurgica di Catania. Paper. Price, 15 lire. Pp. 162, with illustrations. Catania: Vincenzo Muglia, 1933.

Sponsored by the Medicochirurgical Society of Catania, under the editorship of Professor Guglielmo, a number of eminent clinicians and research workers, among them the pathologist Fichera, a collective review has been published on the specific treatment of brucellosis. A better title than the one using the word "specific" would be "The Biologic Treatment of Brucellosis," since the work is limited to the study of intravenous vaccine therapy of the various clinical forms of brucellosis, including parabrucellosis infection. The various contributions make up a unit of well connected pleas for the value of bacterial vaccines in these infections, and particularly for the intravenous administration instead of the conventional subcutaneous or interdermal uses. Well controlled observations seem to indicate that clinical results amounting to well defined clinical cures have been obtained after four or five injections.

The doses used have been one million killed bacteria for the first injection. The injections have been administered every four or five days in amounts of one hundred million, increasing to from ten to fifty millions at each injection. Dr. Guglielmo reports thirty cases, which were uniformly cured in from seven to eight injections, establishing for that group a record of 100 per cent results. The meningo-encephalic manifestations of brucellosis as well as cases of vegetative endocarditis with degenerative myocarditis are discussed, and anatomopathologic material from necropsies is well presented. On the whole, the review is of extreme interest and replete with good therapeutic suggestions.

A Practical Medical Dictionary of Words Used in Medicine with Their Derivation and Pronunciation, Including Dental, Veterinary, Chemical, Botanical, Electrical, Life Insurance and Other Special Terms; Anatomical Tables of the Titles in General Use, the Terms Sanctioned by the Basle Anatomical Convention and Those Suggested by the Nomenklatur-Kommission; Pharmaceutical Preparations, Official in the U. S. and British Pharmacopoeias and Contained in the National Formulary, and Comprehensive Lists of Synonyms. By Thomas Lathrop Stedman, A.M., M.D. Twelfth edition. Leather. Price, $7.50, indexed; $7, without index. Pp. 1256, with illustrations. Baltimore: William Wood & Company, 1933.

This authoritative work is now in its twelfth revised edition. In the introductory note it is pointed out that it contains about a thousand new titles, which would indicate that the medical language grows by at least one word a day. All the changes of the British Pharmacopeia of 1932 are indicated, and also changes in anatomic nomenclature. The present issue is thirty-three pages longer than previous issues of what is already one of the most complete medical dictionaries available. Notwithstanding the fact that the publication is dated August 1933, one fails to find reference to ascorbic acid or to dinitrophenol.

The Physician as Man of Letters, Science and Action. By Thomas Kirkpatrick Monro, M.A., M.D., Regius Professor of Medicine in the University of Glasgow. Cloth, Price, 10/6. Pp. 212. Glasgow: Jackson, Wylie & Company, 1933.

For many years the author has been collecting data relative to medical men who distinguished themselves in other ways than in the practice of medicine. Nevertheless the work is quite incomplete. It would require far more study and research than the author has been able to give to this subject to supply an adequate list of names. His list is particularly weak so for as concerns Americans, and, strangely enough, he is even deficient in his list of British physicians who have made distinguished names in other fields. In his section on poets one finds Sir Robert Bridges, George Crabbe, Oliver Goldsmith, Keats and John McCrae. One seeks in vain under dramatists for the name of Arthur Schnitzler. Among his writers of fiction one finds Conan Doyle, but missing are Arthur Cronin, Somerset Maugham and Francis Brett Young. His list of ambassadors and statesmen fails to include Geddes, Ramon y Cajal and Virchow. It is amusing to note the physicians who have been pirates and the names of noted criminals. The volume is an interesting beginning of what might be developed into a highly important work.

To Be or Not to Be: A Study of Suicide. By Louis I. Dublin, Ph.D., Third Vice-President and Statistician, Metropolitan Life Insurance Company, and Bessie Bunzel, M.A., Research Assistant, Statistical Bureau, Metropolitan Life Insurance Company. Cloth. Price, $3.50. Pp. 443, with illustrations. New York: Harrison Smith & Robert Haas, 1933.

The gradual increase in suicide, which has brought self destruction up to a place among the first twenty in the list of causes of death, is a problem that concerns not only the medical profession but workers in all the social sciences. Although the literature, both periodical and book, is extensive, it is safe to say that Dr. Dublin's volume constitutes the most competent word thus far offered on the subject. He considers suicide from the historical point of view. He is concerned with its prevalence, with the influence of environment, and with its relationship to life insurance. He discusses its psychology and the methods of prevention. The points of view of the various churches are considered, as well as the legal aspects. The volume is supplemented by a series of tables presenting the fundamental data. There is also an adequate index. Dr. Dublin sees the answer to the problem of suicide in a more general distribution of the good things of life, a change in our economic system and a more widespread application of education in mental hygiene as well as in the practice of those branches of medicine which deal with problems of personal adjustment.

History of the University of Edinburgh, 1883-1933. Edited on Behalf of the History Committee by A. Logan Turner, M.D., LL.D., F.R.C.S. Published for the University. Cloth. Price, 10/-. Pp. 452, with 27 illustrations. Edinburgh: Oliver and Boyd, 1933.

One of the most distinguished universities in the world deserves fully the biography here made available. The biography has been written by professors in various departments and concerns each of the special schools, containing as well a section on the university portraits and on the life of the student community. This volume is essentially supplementary to the previous one, entitled "The Story of the University During Its First Three Hundred Years," published in 1884. The book is beautifully printed, handsomely illustrated and supplemented by a number of appendixes giving biographic notes, donors and similar lists. Of special interest to the medical profession is the chapter on the faculty of medicine, by Prof. John Dixon Comrie. It provides not only a list of each of the men who held the chairs in various departments and of their contributions to medical periodical literature but also some excellent portraits and estimates of the Edinburgh contribution to medical progress. Most important of those included are Sir William Turner and Lord Lister.

Laboratory Medicine: A Guide for Students and Practitioners. By Daniel Nicholson, M.D., Assistant Professor of Pathology, University of Manitoba. Second edition. Cloth. Price, $6.50. Pp. 569, with 127 illustrations. Philadelphia: Lea & Febiger, 1934.

This useful book on laboratory diagnosis is now available in a thoroughly revised edition. The first edition was published four years ago and was well received by the profession. While little of the material has become antiquated in this short time the author has revised and brought each subject to the present. Many new procedures have been added. The revised edition reflects the manner in which the author has anticipated the need of practicing physicians. The chapter on the choice of tests to confirm or disprove their diagnosis has been considerably amplified with new material on the more common conditions seen in practice. This book is highly recommended to the medical student and practicing physician for information on the indication, method and interpretation of laboratory tests that are particularly adapted to the complete study of the patient. It is perhaps one of the most practical and concise textbooks of laboratory medicine in any language.

Medicolegal

Hospitals: Right of Employee to Bind Employer for Payment of Hospital Bill.—About 2 o'clock in the morning, March 29, the back of an employee of the defendant was broken in the course of his employment. The manager of the defendant's plant, where the accident occurred, directed the night engineer, who was in charge of the plant at that time, to call a physician. He called one of the two physicians designated by the defendant's insurance carrier to serve in such emergencies. When the physician found that the injured workman's back had been broken, he directed that his patient be sent to a hospital. The night engineer then summoned an ambulance and the injured man was taken to the plaintiff's hospital, where he remained until he died.

On June 6, more than two months after the patient had been admitted, attorneys for the defendant's insurance carrier notified the hospital that neither the employer nor his insurance carrier would be responsible for any hospital bills in excess of the hospital's proportionate share of $200, the limit of liability for medical services imposed by the Kansas workmen's compensation act on employers. Subsequently, on June 20, a bill for $272.40 was sent to the injured workman and on September 15 a bill for $710.45 was made out against him. The latter bill was not delivered, for the injured workman, whom the hospital had continued to care for, had died the preceding day. Apparently, demand was then made on the employer, but payment of anything in excess of $75 was refused. The insurance carrier represented that that amount was the hospitals' share of the money payable by the employer, under

the workmen's compensation act, for medical treatment. The tender was rejected and action brought against the employer for the amount of the bill. Judgment was given in favor of the hospital. The employer appealed to the Supreme Court of Kansas.

The hospital contended that under the circumstances of the case there was an implied agreement by the employer to pay the bill for the services rendered its injured employee. The Supreme Court, however, held to the contrary, holding that the night engineer, on whose order the employee was taken to the hospital, was not authorized to bind his employer for payment. The fact that the manager of the defendant's plant told the engineer to call a physician did not prove that he directed the engineer to bind the company to pay hospital bills. Said the court:

> "Authority to bind the corporation for medical services, etc., either for employees or for others who are injured in the course of the operation of a railroad is not ordinarily to be inferred from the duties of a subordinate agent or employee, such as a conductor, a station agent, a roadmaster, a yardmaster, an engineer, or an attorney for the company." *144 A. C. J. 455.*

The Supreme Court therefore reversed the judgment in favor of the plaintiff and directed the trial court to enter judgment in favor of the employer.[1]—*St. Mary's Academy v. Railways Ice Co. (Kan.), 26 P. (2d) 278.*

Workmen's Compensation Acts: Undulant Fever Contracted in Caring for Infected Cattle Compensable.—The claimant, Crowley, a dairy instructor in the Idaho Industrial Training School, had to supervise and handle the school's dairy herd. Some of the cows were infected with contagious abortion. At calving time he removed the afterbirths with his bare arm and in the same manner, after the calves were born, he treated the cows with disinfectants. Some time after he had been so engaged he was stricken with undulant fever and was ill for several months. The industrial accident board of Idaho, however, denied his claim for compensation under the workmen's compensation act, because of legal technicalities, and he appealed to the district court, Fremont County. That court decided the technicalities in his favor, found that the undulant fever from which he was suffering had been contracted in the course of his employment, and reversed the order of the industrial accident board that denied him compensation. His employer thereupon appealed to the Supreme Court of Idaho.

His employer contended that the undulant fever from which Crowley suffered was an occupational disease, not an accident, and therefore was not compensable under the Idaho act. The Supreme Court pointed out, however, that his disability had resulted from his exposure to contagious abortion in treating the cattle suffering from that disease; that other employees who handled the cows did not become infected; that the usual source of undulant fever is through the human digestive tract, by taking raw fat [sic] or milk, and that contracting undulant fever by direct contact with cows carrying its infective germ because they are suffering from contagious abortion is an infrequent occurrence. In *Ramsay v. Sullivan Min. Co.*, 51 Idaho 366, 6 P. (2d) 856, the Supreme Court of Idaho said:

> An occupation or industry disease is one which arises from causes incident to the profession or labor of the party's occupation or calling. It has its origin in the inherent nature or mode of work of the profession or industry, and it is the usual result or concomitant. If, therefore, a disease is not a customary or natural result of the profession or industry, per se, but is the consequence of some extrinsic condition or independent agency, the disease or injury cannot be imputed to the occupation or industry, and is in no accurate sense an occupation or industry disease.

In the present case, said the Supreme Court, if the injury sustained by Crowley was not an injury inherent in his occupation, as commonly understood, but an accident in the popular and ordinary sense of the word, as denoting an unlooked for mishap or untoward event which is not expected or designed, his claim for compensation cannot be denied on the theory that the injury resulted from an occupational disease and not from an accident. The Supreme Court accordingly affirmed the award in favor of the infected employee.—*Crowley v. Idaho Industrial Training School (Idaho), 26 P. (2d) 180.*

1. For cases holding substantially contrary to the holding of the Supreme Court of Kansas in this case, see: Page v. Thomas (Texas), 47 S. W. (2d) 894, J. A. M. A. **100**: 365 (Feb. 4), 1933. St. Barnabas Hospital v. Minneapolis, 68 Minn. 254, 70 N. W. 1126.

Society Proceedings

COMING MEETINGS

American Medical Association, Cleveland, June 11-15. Dr. Olin West, 535 North Dearborn Street, Chicago, Secretary.

American Academy of Pediatrics, Cleveland, June 11-12. Dr. Clifford G. Gruler, 636 Church Street, Evanston, Ill., Secretary.

American Association for the Study of Goiter, Cleveland, June 7-9. Dr. J. R. Yung, 670 Cherry Street, Terre Haute, Ind., Secretary.

American Association for the Study of Neoplastic Diseases, Baltimore, June 21-23. Dr. Eugene R. Whitmore, 2139 Wyoming Avenue, N.W., Washington, D. C., Secretary.

American Association of Genito-Urinary Surgeons, Hot Springs, Va., May 14-16. Dr. Henry L. Sanford, 1621 Euclid Avenue, Cleveland, Secretary.

American Association of Industrial Physicians and Surgeons, Cleveland, June 11-12. Dr. Volney S. Cheney, Armour and Company, Union Stock Yards, Chicago, Secretary.

American Association of Medical Milk Commissions, Cleveland, June 11-12. Dr. Harris Moak, 360 Park Place, Brooklyn, Secretary.

American Association on Mental Deficiency, New York, May 26-29. Dr. Groves B. Smith, Beverly Farms, Godfrey, Ill., Secretary.

American Bronchoscopic Society, Cleveland, June 11. Dr. Louis H. Clerf, 110 South 10th Street, Philadelphia, Acting Secretary.

American Clinical and Climatological Association, Toronto, Canada, May 21-23. Dr. Francis M. Rackemann, 263 Beacon Street, Boston, Secretary.

American Dermatological Association, New York, June 7-9. Dr. William H. Guy, 500 Penn Avenue, Pittsburgh, Secretary.

American Gynecological Society, White Sulphur Springs, W. Va., May 21-23. Dr. Otto H. Schwarz, 630 South Kingshighway, St. Louis, Secretary.

American Heart Association, Cleveland, June 12. Dr. Irl C. Riggin, 50 West 50th Street, New York, Executive Secretary.

American Laryngological Association, Cleveland, June 7-9. Dr. William V. Mullin, 9204 Euclid Avenue, Cleveland, Secretary.

American Neurological Association, Atlantic City, June 4-6. Dr. Henry Alsop Riley, 117 East 72d Street, New York, Secretary.

American Orthopedic Association, Rochester, Minn., June 6-9. Dr. Ralph K. Ghormley, Mayo Clinic, Rochester, Minn., Secretary.

American Physiotherapy Association, Cleveland, June 13-16. Mrs. Bess Searls, 1430 West 77th Place, Chicago, Secretary.

American Proctologic Society, Cleveland, June 11-12. Dr. Frank G. Runyeon, 1361 Perkiomen Avenue, Reading, Pa., Secretary.

American Psychiatric Association, New York, May 28-June 2. Dr. William C. Sandy, State Education Building, Harrisburg, Pa., Secretary.

American Society of Clinical Pathologists, Cleveland, June 8-11. Dr. A. S. Giordano, 531 North Main Street, South Bend, Ind., Secretary.

American Surgical Association, Toronto, Canada, June 4-6. Dr. Vernon C. David, 59 East Madison Street, Chicago, Secretary.

American Therapeutic Society, Cleveland, June 8-9. Dr. Oscar B. Hunter, 1835 Eye Street, N.W., Washington, D. C., Secretary.

American Urological Association, Atlantic City, May 22-24. Dr. Gilbert J. Thomas, 1009 Nicollet Avenue, Minneapolis, Secretary.

Arizona State Medical Association, Prescott, June 7-9. Dr. D. F. Harbridge, 822 Professional Building, Phoenix, Secretary.

Association for the Study of Allergy, Cleveland, June 11-12. Dr. Warren T. Vaughan, 808 Professional Building, Richmond, Va., Secretary.

Association for the Study of Internal Secretions, Cleveland, June 11-12. Dr. F. M. Pottenger, Pottenger Sanatorium, Monrovia, Calif., Secretary.

Connecticut State Medical Society, Bridgeport, May 23-24. Dr. Charles W. Comfort, Jr., 27 Elm Street, New Haven, Secretary.

Illinois State Medical Society, Springfield, May 15-17. Dr. Harold M. Camp, Lahl Building, Monmouth, Secretary.

Maine Medical Association, Bangor, May 28-29. Miss Rebekah Gardner, 22 Arsenal Street, Portland, Secretary.

Massachusetts Medical Society, Worcester, June 4-6. Dr. Walter L. Burrage, 182 Walnut Street, Brookline, Secretary.

Medical Library Association, Baltimore, May 21-23. Miss Marjorie J. Darby, 345 Hudson Street, Detroit, Secretary.

Medical Women's National Association, Cleveland, June 10-12. Dr. Elizabeth Kittredge, 3906 McKinley Street, Washington, D. C., Secretary.

National Tuberculosis Association, Cincinnati, May 14-17. Dr. Charles J. Hatfield, Henry Phipps Institute, Philadelphia, Secretary.

Nebraska State Medical Association, Lincoln, May 22-24. Dr. R. B. Adams, Center-McKinley Building, Lincoln, Secretary.

New Hampshire Medical Society, Manchester, May 15-16. Dr. C. R. Metcalf, 5 South State Street, Concord, Secretary.

New Jersey Medical Society of, Atlantic City, June 5-8. Dr. J. B. Morrison, 30 Hartford Avenue, Newark, Secretary.

New York, Medical Society of the State of, Utica, May 14-16. Dr. D. S. Dougherty, 2 East 103d Street, New York, Secretary.

North Dakota State Medical Association, Fargo, May 28-29. Dr. Albert W. Skelsey, 20½ Broadway, Fargo, Secretary.

North Pacific Pediatric Society, Vancouver, B. C., June 18. Dr. R. H. Somers, 1305 Fourth Avenue, Seattle, Secretary.

Oklahoma State Medical Association, Tulsa, May 21-23. Dr. L. S. Willour, Ainsworth Building, McAlester, Secretary.

Pacific Northwest Medical Association, Salt Lake City, June 21-23. Dr. C. W. Countryman, 402 Riverside Avenue, Spokane, Wash., Secretary.

Rhode Island Medical Society, Providence, June 7. Dr. J. W. Leech, 167 Angell Street, Providence, Secretary.

South Dakota State Medical Association, Mitchell, May 14-16. Dr. John F. D. Cook, Langford, Secretary.

Texas, State Medical Association of, San Antonio, May 14-17. Dr. Hulman Taylor, Medical Arts Building, Fort Worth, Secretary.

Utah State Medical Association, Salt Lake City, June 21-23. Dr. Leland R. Cowan, 305 Medical Arts Building, Salt Lake City, Secretary.

West Virginia State Medical Association, Huntington, May 14-16. Mr. Joe W. Savage, Public Library Building, Charleston, Executive Secretary.

Current Medical Literature

AMERICAN

The Association library lends periodicals to Fellows of the Association and to individual subscribers to THE JOURNAL in continental United States and Canada for a period of three days. Periodicals are available from 1925 to date. Requests for issues of earlier date cannot be filled. Requests should be accompanied by stamps to cover postage (6 cents if one and 12 cents if two periodicals are requested). Periodicals published by the American Medical Association are not available for lending but may be supplied on purchase order. Reprints as a rule are the property of authors and can be obtained for permanent possession only from them.

Titles marked with an asterisk (*) are abstracted below.

Alabama Medical Association Journal, Montgomery

3: 265-292 (Feb.) 1934

Neurosyphilis: Study of Two Hundred and Forty Cases. R. C. Partlow and F. A. Kay, Tuscaloosa.—p. 265.
Prophylaxis of Labor. J. R. Garber, Birmingham.—p. 269.
Use of Local Anesthesia in Fractures. O. R. Grimes, Gadsden.—p. 272.
Respiratory Diseases in Children. H. Kennedy Jr., Birmingham.—p. 274.
New Uses of Old Drugs. J. E. Cameron, Eclectic.—p. 278.

Am. J. Roentgenol. & Rad. Therapy, Springfield, Ill.

31: 145-288 (Feb.) 1934

Diagnosis and Treatment of Primary Carcinoma of Bronchus or Lung: Caldwell Lecture. E. A. Graham, St. Louis.—p. 145.
Early Experiences in Radiation Therapy: Janeway Memorial Lecture. J. Ewing, New York.—p. 153.
Relation of the American College of Radiology to the Future of Radiology. A. Soiland, Los Angeles.—p. 164.
Roentgen Study of Absorption by Lymphatics of Thorax and Diaphragm of Thorium Dioxide Injected Intrapleurally into Animals. L. J. Menville and J. N. Ané, New Orleans.—p. 166.
*Oblique View for Demonstration of Articular Facets in Lumbosacral Backache and Sciatic Pain. R. K. Ghormley and B. R. Kirklin, Rochester, Minn.—p. 173.
Subdiaphragmatic Abscess. A. J. Delario, Paterson, N. J.—p. 177.
Barium Meal Examination of Stomach in Presence of Unrecognized Perforated Peptic Ulcer. H. A. Singer, Chicago.—p. 191.
Multiple Diverticula of the Jejunum and Duodenum: Simulating Gastric Diverticula and Complicated by Cholelithiasis. E. A. Schmidt and P. H. Guttman, Denver.—p. 200.
Primary Carcinoma of the Duodenum: Case Report. P. C. Swenson and A. G. Levin, New York.—p. 204.
Roentgenographic Manifestations of Urinary Bilharziasis and Calculous Formations in Egypt, and Intravenous Pyelography. M. A. Afifi, Alexandria, Egypt.—p. 208.
Some Unusual Changes in the Lesser Trochanter of the Femur: Report of Two Cases. M. S. Burman, New York.—p. 224.
Oral Cholecystography: Plea for a Uniform Technic. M. Feldman, Baltimore.—p. 227.
Roentgenologic Diagnosis of Placenta Praevia: Report of Case. W. H. Ude, T. W. Weum and J. A. Urner, Minneapolis.—p. 230.
*Radiosensitive Neuroblastoma. H. Hauser, New York.—p. 234.
*Radiation Therapy of Keloid and Keloidal Scars. F. M. Hodges, Richmond, Va.—p. 238.
Early History of Electron Emission. A. Mutscheller, New York.—p. 244.

Demonstration of Articular Facets in Lumbosacral Backache.—In obtaining an oblique view of the articular facets in sciatic and lumbosacral pain, Ghormley and Kirklin have the patient, lying supine on the table, turned slowly to an oblique position, toward the side to be examined, until the transverse axis of the pelvis is at an angle of 32 degrees with the horizontal. To effect this precise angulation, a rectangular piece of stiff cardboard, measuring 10 by 12 inches (25 by 30 cm.), with a concave lower edge to accommodate the lower part of the abdomen, is employed. On the cardboard is a line drawn radially from the center of the concave lower edge and marking an angle of 32 degrees with the vertical. The tips of the concave edge are applied to the iliac spines, the cardboard is held in an approximately perpendicular plane, and the position of the patient is adjusted by means of sandbags and cushions. The tube carriage, equipped with a cone 6 inches (15 cm.) in length and an aperture of 3½ inches (9 cm.), is swung into position, and the axis of the rays is directed vertically to the midpoint of Poupart's ligament on the elevated side. This point also lies almost vertically over the opposite articular facets of the fifth lumbar vertebra, and they will be depicted approximately in profile. The table is equipped with a flat Potter-Bucky diaphragm, and speed screens are employed. A target film distance of 30 inches (76 cm.), 65 peak kilovolts and 40 milliamperes of current is used. The time of exposure is varied in proportion to the thickness of the patient's body. The important points that may be observed by an oblique view of the articular facets are (1) narrowing of the space between the articulating surfaces of the facets, (2) marginal proliferation about the articulating surfaces of the facets indicating hypertrophic changes or in many instances traumatic arthritis, (3) fractures through the surfaces of the facets or through the adjacent laminae and pedicles, (4) increased roentgenability of the bony structures making up the facets and their supporting structures and decreased roentgenability of these structures. All these changes may be observed in cases of chronic pain in the back in which no other pathologic change is known to exist than the localized traumatic arthritis that causes these syndromes. Besides these changes, one may observe in these roentgenograms changes in the vertebral bodies and intervertebral disks. One should also note that the sacro-iliac joint is presented in a new aspect and one which may possibly lead to more accurate determination of lesions there.

Radiosensitive Neuroblastoma.—Hauser presents a case of neuroblastoma that was sensitive to radiation therapy. Although the patient died of recurrence, the author thinks that radiation therapy may prove to be of value in future cases. The dosage factors used were 200 kilovolts, 30 milliamperes, 0.5 mm. of copper filtration, 50 cm. target skin distance for the neck and pelvis and 70 cm. for the chest. The author believes that earlier recognition and earlier radiation therapy would possibly have given the patient a better prognosis or perhaps a cure and that small, divided doses extended over a period of several weeks with a greater total dosage would have possibly brought about permanent regression.

Radiation Therapy of Keloid.—Hodges states that thick old keloids should be removed surgically and postoperative irradiation given. Radium and roentgen radiation are equally efficacious in the treatment of this condition, but the large area of the body surface usually involved makes roentgen radiation the method of choice in the majority of cases. He has obtained excellent results with from 250 to 300 roentgens of unfiltered rays, from 80 to 90 kilovolts every four to six weeks. The large doses in general use have not been necessary. The most important factor in the treatment of keloid is the institution of proper irradiation in the early stages of the disease while the cells composing the growth are radiosensitive. When there are unsightly deformities, irradiation will usually relieve the contractures without surgery, but when there are broad white bands of dense fibrous tissue in addition to the scars, these bands should be removed surgically.

American Journal of Syphilis and Neurology, St. Louis

18: 1-144 (Jan.) 1934

Syphilitic Albuminuria: Report of Three Cases. P. H. Wosika and F. M. Thurmon, Boston.—p. 2.
Syphilis of the Pituitary Body: Case Report with Review of Literature. F. S. Kennedy and J. H. Fisher, London, Ont.—p. 12.
Aplastic Anemia Following Sulpharsphenamine with Recovery. D. J. Stephens, Rochester, N. Y.—p. 24.
The Physiology of Electropyrexia. C. A. Neymann and S. L. Osborne, Chicago.—p. 28.
*Arsenoxide in Relation to Toxicity and Therapeutic Activity of Arsphenamine and Neoarsphenamine. J. F. Schamberg, J. A. Kolmer and H. Brown, Philadelphia.—p. 37.
*Treatment of Neurosyphilis with Acetarsone (Stovarsol) Given Intravenously: Preliminary Report. L. Spiegel, New York.—p. 56.
Significance of American Distribution of Tabes and Paresis. W. F. Petersen, Chicago.—p. 75.
Value of Negative Hinton Test in Exclusion of Neurosyphilis: Clinical and Laboratory Study. A. Berk and W. A. Hinton, Boston.—p. 92.

Arsenoxide in Relation to Toxicity of Arsphenamine.—Schamberg and his associates found the naphthoquinone color test (Rosenthal) for arsenoxide to be highly sensitive for the detection of this substance in solutions of arsphenamine and neoarsphenamine aerated with oxygen or exposed to the air. The test is much less sensitive for the detection of arsenoxide in the tissues after the administration of the arsphenamines. After the intravenous injection of 0.1 Gm. of arsphenamine in rabbits, arsenoxide was found in the liver in about 0.5 mg. per gram of tissue and in about 0.1 mg. per gram of kidney. None was found in the muscles. After the intravenous injection of 0.2 Gm. of neoarsphenamine per kilogram of weight, arsenoxide was found in about 0.3 mg. per gram of kidney, but none

in the liver or muscles. With smaller amounts of arsphenamine and neoarsphenamine, arsenoxide could not be detected in these tissues. Freshly prepared solutions of arsphenamine and neoarsphenamine do not contain detectable amounts of arsenoxide by this test. When approximately 34 per cent of arsphenamine in alkalized solution was oxidized into arsenoxide with oxygen, the toxicity was about doubled. The amounts of arsenoxide in solutions of neoarsphenamine produced by oxygenation or exposure to air did not correspond as closely with the results of toxicity tests as observed with oxidized solutions of arsphenamine. One lot of neoarsphenamine free of arsenoxide was unusually toxic for the rat. When a solution was oxygenated, the production of arsenoxide was about the same as observed with lots of neoarsphenamine of much lower toxicity. The presence of arsenoxide in solutions of arsphenamine and neoarsphenamine tends to shorten the latent period for trypanocidal effects when injected intravenously into rats with trypanosomiasis but does not appreciably change the minimal curative dose per kilogram of weight as compared with freshly prepared solutions free of arsenoxide. In some tests with neoarsphenamine the presence of arsenoxide appeared to reduce the minimal curative dose. The presence of approximately 34 to 36 per cent of arsenoxide in solutions of arsphenamine and neoarsphenamine not only hastened spirocheticidal effects in rabbits with acute testicular syphilis but reduced the minimal curative dose of each compound about one half. It appears that arsenoxide is more spirocheticidal than trypanocidal.

Treatment of Neurosyphilis with Acetarsone (Stovarsol).—Spiegel used acetarsone intravenously in the treatment of twenty-five patients presenting various types of neurosyphilis over a period of seventeen months. Injections of 1 Gm. were given either weekly or twice weekly according to the patient's ability to come for treatment. The initial dose was in all cases from 0.25 to 0.5 Gm. for the first three or four doses. The injections were given continuously with no rest periods; the more intensive use of acetarsone seems to offer more encouraging results. In the asymptomatic group the Wassermann reaction on the spinal fluid was reduced from positive to negative in two patients and to doubtful in two others. In one patient a strongly positive fluid with 0.2 cc. was reduced to 0.8 cc. In two the negative reactions remained the same. The serologic tests on the blood showed slightly greater positivity in one case following treatment, three remained negative and three showed lessened positivity. The cell count was reduced in all cases, usually after six to ten injections. The protein and globulin content of the spinal fluid was reduced and approached normal figures in all but one case. In six the changes in the colloidal gold curve remained approximately the same; one changed from the first to the second zone. In the group of patients suffering from tabes dorsalis, seven were definitely improved and two had advanced optic nerve changes. The Wassermann reaction of the spinal fluid became negative in these two cases. In two the Wassermann reaction of the spinal fluid was negative in one and plus-minus in the other before treatment was instituted; in four the positive reaction was reduced to negative in two and decreased in the other. In one patient the strongly positive fluid was considerably reduced in all factors. The cell counts varied from 0 to 105 and corresponded to the usual observations of this group, with the exception of one case in which the cell count was unusually high. The protein and globulin fractions gave low figures in all but one case, in which it was increased as the result of accidental contamination of the blood. The serologic tests on the blood were reduced from strongly positive to negative in four, two were negative and remained so, one slightly positive became negative, and another strongly positive was slightly reduced. In the group of six meningovascular patients the Wassermann reaction of the spinal fluid was reduced from positive to negative in two, and in the remaining four the strongly positive fluid showed lessened positivity. The cell counts ranged from 1 to 37. The colloidal gold curves were not distinctive. The protein and globulin was slightly increased in four and considerably increased in two. A decrease in the solids was noted in all the patients. Serologic tests on the blood were reduced from strongly positive to negative in two, and in another the positivity was reduced. One negative reaction remained so, one strongly positive reaction showed no change and one doubtful reaction became negative.

Archives of Otolaryngology, Chicago

19: 157-296 (Feb.) 1934

Management of Chronic Sinus Disease. F. Smith, Grand Rapids, Mich. —p. 157.
Pneumatization of the Temporal Bone. G. E. Tremble, Montreal.—p. 172.
Histopathology and Clinical Interpretation of Experimental Sinus Disease. R. A. Fenton, with the collaboration of O. Larsell, Portland, Ore.—p. 183.
Tuberculosis of the Larynx. D. I. Torin, Pittsburgh.—p. 195.
Recent Advances in Physiology of Hearing. W. J. McNally, Montreal. —p. 201.
Nasopharyngeal Fibroma. W. B. Allan, New York.—p. 216.
*Irrigation in Treatment of Disease of Frontal Sinus: Anatomic Clinical Study of Nasofrontal Connections. O. E. Van Alyea, Chicago.—p. 224.

Irrigation in Disease of Frontal Sinus.—Van Alyea points out that the procedure of catheterization of the frontal sinus is more of a maneuver than an operation. No definite technic is applicable in all cases, but one's search for the natural opening is facilitated if a certain plan is followed. It is not necessary to remove the anterior portion of the middle turbinate. It is kept intact because of its value as a landmark and as a safeguard against injury to the cribriform plate. The turbinate with its attachment on the outer nasal wall outlines the middle meatus, and its removal does not in any way facilitate the search for the opening of the frontal sinus. The anesthetic of choice is a cocaine-epinephrine solution. Cotton saturated with this solution is first placed against the anterior border of the middle turbinate and the nasal wall. After a few moments, this is gently pushed into the middle meatus. Application is next made high up in the meatus by means of a thin, bent applicator. This is allowed to remain until the entire area is anesthetized. The cannula is slipped under the anterior attachment of the middle turbinate with the tip in contact with the outer wall. If the opening is located in this space, gentle pressure upward with an occasional rotation mediad should bring about success. Failing at this point, the operator should explore the entire area of the frontal recess, gradually maneuvering the cannula backward to its posterior boundary. If the tip of the cannula seems to be constantly in contact with hard bony structures, the search is led to the infundibulum. In those cases in which a continuous channel exists between this groove and the frontal sinus, catheterization is comparatively simple. Contact is made with the bulla as the tip of the cannula passes into the hiatus semilunaris. The tip, at first directed outward, is gradually shifted mediad as it follows the channel to the sinus. Should the progress of the cannula be stopped almost immediately, it is undoubtedly because the tip has entered the terminal infundibulum cell. The next attempt is made more medial, but in the infundibular area. Associated difficulties, however, are the various ostia of the infundibular ethmoid cells, which may attract the tip of the cannula in its progress upward. Several attempts may be required before this passageway is safely traversed and the sinus is entered. In case of complete failure, efforts are repeated with the terminal curve of the cannula bent at different angles. The tip of the cannula or probe for that reason should be flexible, for often many bendings take place before an angle is found suitable to the case.

Archives of Pathology, Chicago

17: 141-290 (Feb.) 1934

Melanin: I. Its Mobilization and Excretion in Normal and in Pathologic Conditions. V. C. Jacobsen and G. H. Klinck Jr., Albany, N. Y.—p. 141.
*Experimental Edema: Further Experiments on the Type of Edema Produced by a Diet Low in Protein. S. A. Shelburne, Dallas, Texas. —p. 152.
Lipoid Pneumonia. J. Rabinovitch and M. Lederer, Brooklyn.—p. 160.
Histology of Certain Organs and Teeth in Chronic Toxicosis Due to Fluorine. P. H. Phillips and A. R. Lamb, Madison, Wis.—p. 169.
Nature and Origin of the Xanthoma Cell. L. W. Plewes, Toronto.—p. 177.
*Multiple Necroses of the Spleen (Flecked Spleen of Feitis), with Especial Reference to the Associated Renal Lesions. P. H. Guttman, Denver.—p. 187.
Structural Changes in the Granular Layer of the Cerebellum. E. Y. Williams, New York.—p. 206.

Experimental Edema.—Shelburne produced hypoproteinemia and edema in two of four dogs fed a diet low in protein for a long time. A critical level of plasma proteins for the formation of edema in the dog is probably 4 Gm. of total protein per hundred cubic centimeters and 2 Gm. of plasma

albumin. The fatty changes in the renal tubules of all the dogs with hypoproteinemia were shown not to be accidental but the result of the experimental procedure. The author was unable to prove that these fatty changes are not due to the anemia which invariably complicates these experiments, but he offers evidence that the anemia is not a potent factor. This fat is not the same as that found in the convoluted tubules in patients presenting the nephrotic syndrome, for in the dogs the fat is not in the form of doubly refractile spherocrystals.

Multiple Necroses of Spleen.—Guttman cites a case of flecked spleen in which the anatomic and histologic changes were similar to those reported by Feitis. The kidneys show the lesions of an advanced stage of arteriosclerosis accompanied by arteriolonecrosis. The necrosis is due to occlusion of the splenic arteries of small and medium size. On the basis of the nature of the vascular lesion, three types of flecked spleen are recognized: arteriosclerotic, arteritic and thrombotic. The arteriosclerotic form is the most common, comprising all but three of the twenty-one cases of flecked spleen reported in the literature. The arteriosclerotic form of flecked spleen is associated with renal lesions of hypertension, which in most cases produce death from uremia. The thrombotic form, described in a report of a case of eclampsia, is associated with multiple necroses of the kidney. The arteritic type is described in association with two cases of glomerulonephritis. Flecked spleen should be differentiated from multiple necroses of the malpighian corpuscles associated with acute infectious diseases, as the pathologic changes and pathogenesis in the two conditions are dissimilar.

Florida Medical Association Journal, Jacksonville

20: 331-378 (Feb.) 1934

Unilateral Exophthalmos: Case Report. J. W. Taylor, Tampa.—p. 339.
Heart Disease of Rheumatic Type. C. F. Roche, Miami Beach, and T. D. Jones, Boston.—p. 342.
Epidemic Encephalitis: General Considerations. W. T. Harrison, Washington, D. C.—p. 346.
Nonsurgical Relief of Prostatic Obstructions. R. A. Hennessey and A. D. Mason, Memphis, Tenn.—p. 348.
Sarcoma of Rectum with Metastasis to the Liver: Case Report. J. S. Grable and H. R. Mills, Tampa.—p. 350.
Cancer Conscious. D. P. Bird, Lakeland.—p. 351.

Georgia Medical Association Journal, Atlanta

23: 41-82 (Feb.) 1934

Dietary Deficiencies as Etiologic Factors in Psychoses and Psychoneuroses. J. N. Brawner, Atlanta.—p. 41.
Diathermy in the Abortive Treatment of Pneumonia. R. M. Harbin, Rome.—p. 45.
Pylorospasm or Congenital Hypertrophic Stenosis of the Pylorus. J. C. Brim, Pelham.—p. 51.
Management of the Third Stage of Labor. C. B. Upshaw, Atlanta.—p. 55.
Transurethral Resection of the Prostate Gland: Report of One Hundred and Twenty-Five Cases. E. G. Ballenger, O. F. Elder and H. P. McDonald, Atlanta.—p. 60.
*Injection of Hydroceles with Newer Sclerosing Solutions: Experimental Study. E. Floyd and J. L. Pittman, Atlanta.—p. 63.
Glaucoma. J. A. Smith, Macon.—p. 68.

Injection of Hydroceles: Experimental Study.—Floyd and Pittman made injections in twenty-four cases of hydrocele, using quinine dihydrochloride in one, dextrose and saline solution in two, varisol (a solution containing 30 per cent of invert sugar, 10 per cent of sodium chloride and 1 per cent of benzyl alcohol) in one, glycerin in one and sodium morrhuate in twenty. They used a 5 per cent solution of sodium morrhuate in the majority of their cases because of the uniform results that were obtained with its use in the injection of varicose veins. Recently, however, they added a 0.5 per cent solution of phenol to it. This was done to make it more bactericidal. After preparation of the skin with mercurochrome, a small welt is made with a 1 per cent solution of procaine hydrochloride over the most dependent portion of the sac. A large caliber needle is then inserted into the sac and the fluid is withdrawn. In order to alleviate the initial pain, a 2 per cent solution of procaine hydrochloride is used as a local anesthetic in the sac itself, a small amount being instilled, allowed to remain three minutes, and then withdrawn. The solution is then instilled. Ordinarily 8 cc. of the fluid is used and is allowed to remain one minute. One half of this amount is withdrawn. A little manipulation is then done and a snug fitting support is applied. The patient is sent home and for the next few days there is some swelling of the parts. A week later the scrotum feels firm and may contain some fluid. This is usually only a small amount and is absorbed in ten days. The swelling and firmness disappear eventually and the cure is complete within a month. Rarely is palpable induration of the sac present after this period of time. The authors feel that the sclerosing solutions will obliterate the sacs of the acquired, uncomplicated hydroceles. It must be understood that this method is applicable only to selected types of hydroceles.

Journal of Pediatrics, St. Louis

4: 159-294 (Feb.) 1934

Encephalographic Studies in Children. B. S. Brody and P. F. McAlenney, New Haven, Conn.—p. 159.
Cause of Death in Infantile Eczema. A. B. Schwartz, Milwaukee.—p. 172.
*New Pertussis Antigen: Preliminary Clinical Report. J. M. Frawley, Fresno, Calif.; M. Stallings, San Francisco, and V. C. Nichols, Berkeley, Calif.—p. 179.
Immunization of School Children Against Whooping Cough. J. M. Frawley, Fresno, Calif.—p. 184.
Pertussis: Determination of Immunity by Means of Cutaneous Test. S. K. Siebler and S. Okrent, Cincinnati.—p. 188.
Study of Nephrosis in Children. F. H. Westcott and R. H. Dennett, New York.—p. 191.
Study of Effect of Preserving Methods on Human Milk. W. H. Eddy and S. G. Morris, New York.—p. 208.
*Recovery from Influenzal Meningitis: Case Report. D. H. Duncan and C. H. Webb, Shreveport, La.—p. 216.
Tetany of the New-Born: Case Report. J. D. Craig, New York.—p. 219.
Analysis of Sample Diets and Daily Habits of Two Hundred and Six Children from Data Supplied by Parents. W. P. Lucas, Helen Brenton Pryor and S. T. Pope Jr., San Francisco.—p. 221.
Prophylactic Use and Tolerance of Haliver Oil with Viosterol in Premature and Weakling Infants. E. W. May and Thelma M. Wygant, Detroit.—p. 226.
Study of Breast Milk Fat. P. E. Roller, Cleveland.—p. 238.
Nirvanol Treatment of Chorea. S. W. Marick, Pittsburgh.—p. 242.
Chronic Sialodochitis: Recurrent, Alternating, Familial, Hereditary. H. S. Meyer, Houston, Texas.—p. 248.
Malaria in the New-Born. J. W. Epstein, Cleveland.—p. 251.

New Pertussis Antigen.—The material for the study of Frawley and his associates represents a cross section of a pertussis epidemic waging in California in the winter and spring months of 1932-1933. Injection of a new pertussis antigen (described by Krueger, Nichols and Frawley) was given to 200 children after exposure or during the course of whooping cough. Thirty-five children received injections after exposure but before any symptoms had appeared. Fourteen did not develop symptoms. Of the twenty-one who went on to clinical pertussis, 76 per cent had a favorable therapeutic response. Of the 165 children first seen during the actual course of the infection, eighty-six had been coughing less than one week; 69 per cent of this group gave good response to treatment, with cessation of severe symptoms in less than a week. Seventy-nine children were seen later than one week after the onset of coughing. Treatment in these was not particularly successful, only 45 per cent showing a cessation of severe symptoms within a week. There was little local and no constitutional reaction. The absence of such reactions would preclude the possibility of any significant incidence of nonspecific response. The authors' series gives evidence of the protective value of the antigen, although this protection is not absolute. Cases treated prophylactically in which the disease developed later presented a definitely modified course.

Recovery from Influenzal Meningitis.—Duncan and Webb report complete recovery following adequate spinal drainage in a boy, aged 8, who was one of four children with Pfeiffer bacillus meningitis admitted within the space of a month during the winter of 1932-1933 to the Shreveport Charity Hospital. They state that the available evidence indicates that in the treatment of the disease, as in all forms of nonmeningococcic acute meningitis, it appears that adequate drainage of the cerebrospinal fluid is the one essential. Apparently all the persons who have recovered have had repeated drainages of cerebrospinal fluid, although in many instances various serums and vaccines have been administered by different routes. More efficient drainage of the cerebrospinal fluid by laminectomy has been found valuable in one case of Pfeiffer's bacillus meningitis reported by Martmer and Davidson and in two cases of streptococcus meningitis reported by Leighton and Pringle. Recov-

ery followed in all three of these cases. Retan advised the simultaneous intravenous injection of hypotonic sodium chloride solution, producing forced drainage through increased formation of cerebrospinal fluid. The high mortality in all forms of nonepidemic meningitis should stimulate study of all measures that offer hope of success in treating these conditions.

Journal of Urology, Baltimore

31: 121-256 (Feb.) 1934

Aniline Tumors of the Bladder: Introduction. R. S. Ferguson, New York.—p. 121.
Id.: Etiology of Bladder Carcinoma. R. S. Ferguson, New York. —p. 122.
Id.: Carcinogenetic Agent, Chemistry and Industrial Aspects. G. H. Gehrmann, Wilmington, Del.—p. 126.
Id.: Pathology of Aniline Tumors of the Bladder. D. M. Gay, Wilmington, Del.—p. 137.
Id.: Incidence, Symptoms and Signs, Results of Survey. L. W. Anderson, Wilmington, Del.—p. 148.
Id.: Treatment of Aniline Tumors of the Urinary Bladder. V. D. Washburn, Wilmington, Del.—p. 155.
Experimental Studies in Urinary Infections of Bacillary Type. H. F. Helmholz, Rochester, Minn.—p. 173.
Ketogenic Diet in Treatment of Urinary Infections. A. L. Clark, Rochester, Minn.—p. 193.
Chronic Pyuria in Juveniles. M. F. Campbell, New York.—p. 205.
*Relationship of Urinary Infections to Recurrent Calculi. L. D. Keyser, Roanoke, Va.—p. 219.

Relation of Urinary Infections to Recurrent Calculi.—According to Keyser, aseptic urinary concrements may be formed in consequence of metabolic errors. Pure uratic, cystine and xanthine stones are known examples. While not definitely proved, calcium oxalate and crystalline carbonate and phosphate calculi may at times have such an origin. Stones composed chiefly of triple phosphate and the amorphous carbonate and phosphate of calcium are formed in alkaline urine probably the result of specific urea-splitting organisms. These are the varieties of calculi most frequent to recur and those which are seen most often in patients with stone-forming kidneys. Therapy directed toward the relief of urostasis and clearing up of infection is rational and attended with good result. The mechanism of the formation of urinary concrements as determined by physical chemists and by animal experimentation seems to consist of the coalescence of atypical crystals in the gels of urinary colloids.

Kentucky Medical Journal, Bowling Green

32: 91-136 (Feb.) 1934

Pyloric Stenosis, Plea for Early Diagnosis. G. Gaither, Hopkinsville. —p. 93.
Gonorrheal Infections of the Female. E. D. Smith, Owensboro.—p. 95.
*Cryptorchism with Incidental Carcinoma. J. A. Bowen, Louisville. —p. 98.
Erysipelas: Report of Recurrent Case. M. J. Flexner, Louisville. —p. 99.
Spontaneous Rupture of Liver Abscess. H. S. Frazier, Louisville. —p. 106.
Diseases of the Pancreas: Diagnostic Consideration. V. E. Simpson, Louisville.—p. 108.
Id.: Surgery of Pancreas. I. Abell, Louisville.—p. 120.
Relationship of Infant Mortality to Prenatal Care. S. R. Boggess, Lawrenceburg.—p. 125.
Factors Affecting the Mortality in Early Infancy. L. Palmer, Louisville.—p. 128.
Lymphopathia Venerea in Kentucky: Preliminary Report. R. C. Alley, Lexington.—p. 130.

Cryptorchism with Incidental Carcinoma.—Bowen cites a case of cryptorchism because it shows that testicles not in their proper position do not develop proper function and that such atrophic glands tend toward malignant degeneration. Experience has shown that most undescended testicles may readily be brought down into their proper places and develop normally thereafter, if this is done before the age of puberty. This operation is done preferably between the fifth and the tenth year. If they are neglected beyond the age of puberty, removal had best be done under most circumstances. Malignant conditions of the testicle make up about 5 per cent of the malignant changes occurring in man, and approximately 10 per cent of these are found in the undescended gland. They are rapidly growing, fairly early metasticizing tumors, by way either of the lymph or of the blood channels. They usually spread first to the retroperitoneal lymph nodes about the origin of the iliacs and then to those about the kidney pedicle. They then reach the mediastinum and lungs. If they spread by the blood stream, the lung is, of course, involved earlier. The author believes that, owing to the early stage of the growth in his patient and its apparent complete removal, high voltage roentgen therapy may not have been necessary, but the patient has had three such treatments since his discharge from the hospital. He has gained about 25 pounds (11.4 Kg.) and, except for slight urgency, has no symptoms and feels that he is in good condition.

Medical Annals of District of Columbia, Washington

3: 29-54 (Feb.) 1934

Congenital Syphilis. T. Parran Jr., Albany, N. Y.—p. 29.
Primary Carcinoma of the Lung: Review with Report of Illustrative Cases. C. V. King, Washington.—p. 36.
Delayed Extensive Perirenal Extravasation of Urine Following Traumatic Injury to a Kidney: Report of Case. W. C. Stirling, Washington.—p. 41.
Fundamentals of Internal Medicine: Diseases of Heart. W. M. Yater, Washington.—p. 43.

Medicine, Baltimore

13: 1-122 (Feb.) 1934

Narcolepsy. L. E. Daniels, Rochester, Minn.—p. 1.

Michigan State M. Society Journal, Grand Rapids

33: 49-114 (Feb.) 1934

End-Results in Arthroplasties of the Hip. W. C. Campbell, Memphis, Tenn.—p. 49.
Thyroid Surgery in Southern Michigan as Affected by Generalized Use of Iodized Salt. R. D. McClure, Detroit.—p. 58.
Surgery in the Diabetic Patient. C. F. Vale, Detroit.—p. 63.
Suppurative Labyrinthitis: Case Reports. N. Bentley, Detroit.—p. 69.
Pernoston as a Preanesthetic. E. S. Hoffman, Detroit.—p. 72.
*Operation of Sterilization. H. E. Randall, Flint.—p. 74.

Operation of Sterilization.—Randall has used the following technic since 1921 in 700 sterilizations. No operation should be considered that does not resect both tubes. In a woman a 3 inch low midline incision is made or a Pfannenstiel incision may be used. The finger and thumb of the left hand are introduced into the abdomen, grasping the left ovary and tube. With a small retroflexed uterus it is necessary to use a tenaculum hook to bring the uterus up into the wound. While an assistant makes traction on the tube, a curved pair of hemostatic forceps crushes the horn of the uterus and a curved pair of scissors clips off the horn, it being made certain that the excision is carried down into the uterine muscles. This wound is closed with a number 5 Emmett needle threaded with chromic catgut: then 1½ inches of the tube is excised. A needle is introduced throughout the surface of the broad ligament below the round ligament, which next picks up the proximal end of the tube and the needle is passed back through the broad ligament. By traction of this suture the new proximal end of the fallopian tube is brought into contact with the posterior surface of the broad ligament. The suture is then tied. This operation is repeated on the opposite side. In patients who had borne children this technic occasionally resulted in hemorrhage from the wound in the uterus. In these cases a double salpingectomy is preferable. In the male an incision is made over the vas deferens as it is held between the thumb and finger. The vas feels like a small wire and when reached peels out easily and at least 1½ inches is excised. Interrupted chromic catgut sutures including dartos and skin are inserted and the operation on the opposite vas is done in an identical manner. After-care is ten days in bed in the case of women and a week for men.

Missouri State Medical Assn. Journal, St. Louis

31: 45-88 (Feb.) 1934

Management of Bladder Diverticula. J. E. Glenn and C. E. Burford, St. Louis.—p. 45.
Avoiding Complications in Gynecologic Radium Therapy. E. K. Robinson, Kansas City.—p. 47.
Enlarging Conceptions of Mycotic Infections of Feet and Hands. T. B. Hall, Kansas City.—p. 50.
Nonsurgical Treatment of Pulmonary Tuberculosis; Including Artificial Pneumothorax. J. B. Stokes, Mount Vernon.—p. 54.
Diagnosis and Prognosis of Adult Pulmonary Tuberculosis. G. D. Kettelkamp, Koch.—p. 59.
Tuberculosis of Bones and Joints. F. D. Dickson, Kansas City.—p. 63.
Management of the Toxic Goiter Patient Viewed in a New Light. W. Bartlett, St. Louis.—p. 67.
A Preview of My Book on Surgical Pathology of the Mammary Gland. A. E. Hertzler, Halstead, Kan.—p. 72.
Trachoma in the White Population of the United States. C. E. Rice, Rolla.—p. 73.

Radiology, St. Paul

22: 131-260 (Feb.) 1934

*Value of Meniscus Sign in Roentgenologic Diagnosis of Ulcerating Gastric Carcinoma. B. R. Kirklin, Rochester, Minn.—p. 131.
Carcinoma of Lip and Mouth. C. L. Martin, Dallas, Texas.—p. 136.
Chronic Arthritis of the Spine. H. P. Doub, Detroit.—p. 147.
Cancer of Prostate: Results of Radium and Roentgen-Ray Treatment. B. P. Widmann, Philadelphia.—p. 153.
*New Method for Visualization of Unobstructed Esophagus. H. E. Wright and E. B. Freeman, Baltimore.—p. 160.
Some New Principles in Design of X-Ray Apparatus. A. Bouwers, Eindhoven, Holland.—p. 163.
Efficiency of X-Ray Stereoscopy as Influenced by the Method of Trip of the Tube. P. M. Andrus and A. Hambleton, London, Canada.—p. 174.
Perforation of Peptic Ulcer Following X-Ray Examination with a Barium Meal. H. A. Singer, Chicago.—p. 181.
Correlation of Roentgen and Pathologic Findings in Perthes' Disease. R. W. Lewis, New York.—p. 188.
X-Ray Study of the Postoperative Stomach. J. R. Carty, S. Weintraub and R. K. Felter, New York.—p. 191.
Some Problems and Results in Cholecystography. Cassie B. Rose, Chicago.—p. 197.
Pneumonoconiosis, with Especial Reference to Some of Its Complications. J. L. Dubrow, Memphis, Tenn.—p. 202.
Treatment of Uterine Fibromyomas. Leda J. Stacy, Rochester, Minn.—p. 212.
Behavior of Intervertebral Disk in Certain Spine Lesions. E. Freedman, Cleveland.—p. 219.
Relative Value of Stereoscopic and Single Films in Routine Examination of the Chest. F. B. Exner, Bellingham, Wash., and L. G. Rigler, Minneapolis.—p. 236.
Right-Sided Atypical Diaphragmatic Hernia: Case. W. G. Herrman, Asbury Park, N. J.—p. 241.

Meniscus Sign in Diagnosis of Ulcerating Gastric Carcinoma.—Kirklin points out that in gastric ulceration when the lesion is on or near the lesser curvature in the vertical portion of the stomach the ulcer crater is seen roentgenoscopically under palpatory pressure as a crescentic shadow, with its convexity directed outward, and that the term "meniscus" is aptly applied to it. When the lesion is on the lesser curvature distal to the angular incisura, the base of the crater bends with the wall and the meniscus is concave above. If the ulcer is on the posterior wall, the crater appears, under manual pressure over the stomach, as a dense, irregularly rounded shadow encircled by a transradiant zone, which corresponds to the elevated border. At the Mayo Clinic in every surgical case in which these manifestations are elicited an ulcerating carcinoma has been found at operation. The author believes that, although the meniscal form of the crater as seen in typical cases is important, it seems to him that the slightly raised, overhanging border is even more significant. When the pressure necessary to demonstrate it is exerted over a lesion of this character on the lesser curvature, the crater filled with barium is separated from the barium in the stomach by a clear zone representing the approximated overhanging border of the ulcer. Similarly, when the lesion is on the posterior wall, the marginal ridge surrounding the crater is depicted as an encircling transradiant zone. In either instance the zonal defect is quite as striking as the shadowed crater and distinguishes the lesion from benign ulcer, which seldom has a raised or overhanging border. Another mark of the meniscus crater is its slowness in emptying under pressure, and for this the marginal shelf is also responsible. To demonstrate these lesions and determine their character, roentgenoscopic examination under manipulation is indispensable. Inspection should begin when the first swallow of barium enters the stomach, and the mixture should be distributed over the gastric walls by palpatory pressure to exhibit the entire mucosal relief. By a downward stroking pressure of the examiner's hand, the meniscus complex of the crater and the encircling ridge can be seen clearly above or between the outspread fingers. The complex is demonstrable not only when the lesions are moderately large but also when they are quite small.

Visualization of Unobstructed Esophagus.—To visualize the unobstructed esophagus, Wright and Freeman have the subject placed standing in the right anterior position against the upright cassette and instructed to take two or three deep breaths. At the end of a forced expiration the subject is told to swallow two or three mouthfuls of a rather thick barium mixture and as soon as this has been accomplished the roentgen exposures are made; that is, during suspended respiration. This procedure is rehearsed two or three times in order that there may be no misunderstanding and to make sure of satisfactory results. By this method the authors were able in the majority of cases to obtain satisfactory outlines of the filled esophagus and they believe that, if this method is followed carefully, any roentgenologist can produce good roentgenograms of the normal filled esophagus without much practice and with no added expense.

Surgery, Gynecology and Obstetrics, Chicago

58: 255-550 (Feb. 15) 1934

*Parathyroid Tumors Associated with Hyperparathyroidism: Eleven Cases Treated by Operation. E. D. Churchill and O. Cope, Boston.—p. 255.
Hyperthyroidism and Associated Diseases. G. W. Crile, Cleveland.—p. 272.
*Mastopathia and Chronic Mastitis. H. B. Whitehouse, Birmingham, England.—p. 278.
Ligation of Large Arteries. M. R. Reid, Cincinnati.—p. 287.
Thrombo-Angiitis Obliterans: Buerger's Disease. G. E. Brown, Rochester, Minn.—p. 297.
Sympathectomy in Children. D. E. Robertson, Toronto.—p. 312.
*Operative Lengthening of the Femur. V. Putti, Bologna, Italy.—p. 318.
The Common Syndrome of Rupture Dislocation and Elongation of the Long Head of the Biceps Brachii: Analysis of One Hundred Cases. E. L. Gilcreest, San Francisco.—p. 322.
Transurethral Surgery. J. R. Caulk, St. Louis.—p. 341.
Pathogenesis of Hydronephrosis. F. Hinman, San Francisco.—p. 356.
Prostate Gland: Its Place in General Medicine: Newer Conception of Diagnosis and Treatment. J. F. McCarthy, New York.—p. 377.
Removal of Orbital Tumors. W. L. Benedict, Rochester, Minn.—p. 383.
Surgical Correction of Ocular Disfigurements. M. Wiener, St. Louis.—p. 390.
Economics in Otolaryngology. B. R. Shurly, Detroit.—p. 394.

Parathyroid Tumors Associated with Hyperparathyroidism.—Churchill and Cope state that the immediate result in their eleven cases, in which a parathyroid tumor has been removed either completely or by subtotal resection, has been a correction of the disturbance in calcium and phosphorus metabolism. In fact, postoperative studies showing the return to normal constitute the final step in establishing the diagnosis and efficacy of the treatment. They are notably lacking in the reported cases of Paget's disease and arthritis. Following removal of the tumor in true hyperparathyroidism, the serum calcium values fall with dramatic rapidity. Symptoms and signs of tetany may appear even with a serum calcium above the normal level when hypercalcemia has been present for a long time. The tetany is controlled by a high calcium diet and by the administration of calcium gluconate, viosterol and parathyroid extract. Improvement in many of the symptoms of hyperparathyroidism may be expected within a few days. In several instances the patient has been made conscious of certain long standing but ill defined symptoms such as loss of energy, constipation or fatigue only by their abrupt cessation following operation. These symptoms are then recognized in retrospect as manifestations of the disease. The muscle and joint pains as well as bony tenderness are promptly relieved. The replacement of calcium in the bones takes a longer time and many months may elapse before any change becomes apparent roentgenographically. The bone tumors being osteoclastomas may be expected to disappear, but the bone cysts formed by fibrous replacement of bone substance persist. How far the kidney damage may be repaired is not known. In certain cases some improvement in renal function has been observed. The only fatality in the eleven cases occurred following the removal of a ureteral stone several weeks after the resection of a parathyroid adenoma. The authors outline the plan of operation and the method of dealing with parathyroid tumors contained in the mediastinum.

Mastopathy and Chronic Mastitis.—Whitehouse believes that in chronic mastitis one is dealing with the results of a disorder of function and not primarily with an inflammatory condition. Anomalies in mammary activity occur either as excessive epithelization of individual acini, as hypersecretion on the part of the mammary lobules or in defective absorption and autolysis of the products of secretory activity. From a study of the whole of the pathologic material in the University of Birmingham classified under "chronic mastitis" and the opinions that the author has formed after an investigation of this and his own material he concludes that: 1. It is a matter of importance to correlate the microscopic appearance of the mammary acini and ducts with the period in the menstrual cycle

when the material is obtained. Otherwise what is physiologic may be regarded as pathologic. 2. Abnormalities in the sexual rhythm should be carefully noted, as the same factors that cause irregularities in the menstrual function also produce a typical appearance in the breast epithelium. 3. The condition described as "mazoplasia" is commonly associated in the same organ with the lesion described as "cystipherous hyperplasia." 4. In both lesions epithelial hyperplasia is the preliminary dominant factor and in both lesions the presence of the physiologic lymphocyte in large numbers is a constant factor. 5. Mazoplasia in the adult breast appears to be the natural result of excessive stimulation of the mammary epithelium by the luteal hormone. 6. The result of repeated cyclic excessive stimulation of the mammary epithelium results in the production of excessive secretion and cystic disease. The formation of cysts merely appears to represent a breakdown in the normal balance between production and absorption. 7. Mazoplasia cannot be regarded as entirely physiologic. It is physiologic in the sense that it represents functional activity, but this activity is pathologic and is an indicator of excessive zeal on the part of the physiologic stimulus, either in amount or in concentration. 8. The fluid from mammary cysts is quite definitely a secretion of the mammary epithelium. It also contains colostrum cells and epithelium in process of autolysis. It does not contain fibrin and it does not coagulate. Chemically some specimens show evidence of fat and others contain urea and uric acid. In seventeen of the author's twenty cases of mastopathy both pain and swelling of the breasts disappeared after a few months of treatment with theelin during the premenstrual phase, although the effect was not always manifest after the first or second course of injections. He believes that mastopathy may be relieved and the onset of mammary stagnation prevented by the use of the estrus producing hormone in sufficient quantity to counteract the activity of the corpora lutea.

Operative Lengthening of the Femur.—Putti in performing his operative lengthening of the femur has the patient prepared surgically the day before the operation. A Putti operating table is used on which the patient can be maneuvered into the desired position. Under ether anesthesia and iodine preparation of the skin, a Kirchner wire is inserted through the soft parts and the underlying greater trochanter of the femur, in the anteroposterior axis. Another wire is inserted through the supracondylar region of the femur running from the outside in. This wire is inserted in the horizontal plane. A long incision is made over the lateral aspect of the thigh in the middle third and is carried through the subcutaneous tissue, fascia lata and vastus externus down to the shaft of the femur. After closure of the wound and the application of the dressings, the patient is transferred to bed and placed in traction on a Braun frame. The upper wire is firmly fixed to the upper part of the bed by heavy braided wire. Increasing traction is applied to the lower Kirchner wire, beginning with from 7 to 8 Kg. (15 to 17 pounds) and from then on, 1 to 2 Kg. (2 to 4 pounds) is added daily until the desired lengthening—usually from 2½ up to 4 inches—has been attained. The traction period usually requires from eighteen to twenty-one days. Roentgenograms are made about every third day during the entire period of extension. When the desired length has been attained, a sacral rest is inserted under the patient while still in traction, and a spica cast is applied from the costal margin down to the tip of the toes on the side operated on. Little padding is applied and great care should be used in fixing the wires snugly in the cast. The traction remains in place until the cast hardens; then it is disengaged and the patient is moved from the Braun frame onto the bed. Pillows are now used to prop up the limb, which is enclosed in the cast. The wires are usually allowed to remain in place for from three to five more weeks. If a roentgenogram reveals adequate callus formation and the patient is comfortable, the wires are removed. After a few more months another cast is applied with less flexion of the joints and the patient is allowed to get up. Should the roentgenogram reveal inadequate callus, the wires are left in place for a longer period unless signs of infection around the wire are present. The patient requires immobilization from eight to ten months in all. In the eleven cases that the author has treated by this method, no complications whatever arose other than a single case of temporary "toe drop" caused by overstretching of the external popliteal nerve presumably due to faulty position of the knee. The paralysis promptly cleared up with rest and postural treatment.

Tennessee State Medical Assn. Journal, Nashville

27: 33-64 (Feb.) 1934

Aphonia in Acute Leukemia. W. D. Stinson, Memphis.—p. 33.
Encephalitis. H. D. Long, Chattanooga.—p. 36.
Astigmatism as a Cause of Somatic Dysfunction. E. L. Grubb, Knoxville.—p. 40.
Myoma Malignum. E. D. Mitchell Jr., Memphis.—p. 46.

Virginia Medical Monthly, Richmond

60: 645-708 (Feb.) 1934

Observations on Hyperthyroidism, with Especial Reference to Spontaneous Recovery. J. M. Hutcheson, Richmond.—p. 645.
Treatment of Eclampsia. A. C. Davis and P. Davis, Roanoke.—p. 648.
Factors Influencing Mortality in Operative Carcinomas of Large Intestine. A. S. Graham, Richmond.—p. 652.
Coronary Thrombosis. J. Hundley Jr., Lynchburg.—p. 655.
A Discussion of Painless Labor. P. Rucker, Richmond.—p. 657.
Is Poliomyelitis a "Contact" Disease? H. McG. Robertson, Philadelphia.—p. 660.
Some Essentials in Preoperative and Postoperative Treatment in Exodontia. H. Bear, Richmond.—p. 666.
Present Status of Malarial Therapy in General Paralysis. P. G. Hamlin, Philadelphia.—p. 668.
Carcinogenesis: A Line of Research. M. Benmosche, New York.—p. 671.
Diverticulitis. R. P. Hawkins Jr., Clifton Forge.—p. 674.
Use of Kirschner Wire Traction. T. Wheeldon, Richmond.—p. 675.
Diagnosis of Acute Appendicitis. W. H. Reed, Kingsport, Tenn.—p. 679.
Congenital Atresia of the Right Posterior Naris. R. C. Grove, New York.—p. 682.

Wisconsin Medical Journal, Madison

33: 77-168 (Feb.) 1934

Denervation of the Adrenal Glands. G. Crile, Cleveland.—p. 87.
Nervous Indigestion: Roentgenologic Evaluation. F. H. Kuegle, Janesville.—p. 94.
Anemia of the New-Born: Case Report. A. B. Schwartz, Milwaukee.—p. 98.
Rattlesnake Bite: Case Report. J. A. Jackson, Madison.—p. 100.
*Trichomonas Vaginalis Vaginitis: Treatment with Sodium Perborate. W. Smith, Ladysmith.—p. 102.
Acute Abdominal Surgery, from the Standpoint of the General Practitioner. L. O. Simenstad, Osceola.—p. 104.
Treatment of Tuberculosis in General Practice: II. A. L. Banyai, Wauwatosa.—p. 109.
Anal Fissure. A. C. Gorder, Milwaukee.—p. 111.
Ambulatory Treatment of Hemorrhoids. J. M. Scantleton, Sparta.—p. 114.
Disease Prevention and Control of Cancer. W. D. Stovall, Madison.—p. 119.

Trichomonas Vaginalis Vaginitis: Treatment with Sodium Perborate.—Smith describes a method of treatment that has as its purpose the liberation of gaseous oxygen within the vagina, by the introduction of a compound that is not irritating. The patient makes a suspension of one-half teaspoonful of sodium perborate powder in half a cup of lukewarm water. This is approximately from 30 to 40 grains (2 to 2.6 Gm.) in from 3 to 4 ounces of water. In the recumbent position she gently injects this freshly prepared suspension into the vagina night and morning and continues this treatment during menstruation. In two or three days the patient experiences marked relief from symptoms and as a rule speaks of a great lessening of the vaginal discharge. It is the author's practice at the first examination to instill into the vagina a little of a 5 per cent solution of mercurochrome on a sponge, although he believes this unnecessary. If the routine is continued for one or two months or through one or two menstrual periods, the patient may stop all injections and be free from symptoms. This treatment, though quite empirical, has some theoretical basis. It has been shown that Trichomonas vaginalis in cultures is found at the bottom of the test tube and also multiplies under true anaerobic conditions. Cleveland has shown that increased oxygen tension is toxic for a number of parasitic species of Trichomonas. Davis states clinically that a speculum examination, merely letting air into the vagina, will make it difficult to find the protozoan parasites in the fresh specimen of the patient's vaginal discharge the next day. Sodium perborate as it comes in contact with exudates gives off bubbles of oxygen, but more slowly than hydrogen dioxide.

FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

British Journal of Anæsthesia, Manchester

11: 41-86 (Jan.) 1934

*Intrathecal Nerve Root Block: Some Contributions and a New Technic. W. Etherington-Wilson.—p. 43.
Anesthetic Technic Employed in Two Australian Teaching Hospitals. F. W. Green and G. Kaye.—p. 56.
Present Status of Ethylene. Isabella C. Herb.—p. 66.

Technic for Intrathecal Nerve Root Block.—Etherington-Wilson outlines a vertical ascent method for intrathecal nerve root anesthesia. A simple sedative is given the night before operation and dextrose within two hours of the operation. The lumbar skin is prepared at the same time as the operative field. One hour before operation the patient is placed on a wheeled stretcher, the ears are plugged with absorbent cotton and the average person should receive 1/100 grain (0.00065 Gm.) of scopolamine intramuscularly. It is often necessary to give a second half dose of scopolamine half an hour later. An intramuscular injection of ephedrine should be given ten minutes before lumbar puncture. The patient is made to sit up across the table and leans forward supported by a nurse. A 20 cc. syringe filled with 20 cc. of a 1:1,500 solution of nupercaine is inserted, the third lumbar space is punctured and when cerebrospinal fluid appears the stylet is reinserted and the needle is pushed a couple of millimeters farther into the canal by a corkscrew movement. The nurse now makes the patient quite upright, the slow injection is commenced (about fifteen seconds for 10 cc.), and at the same time the seconds-hand clock is started. A certain number of seconds is allowed to elapse before the patient is put into the dorsal position: the latter is carried out without any delay, and as the patient reaches this position the table is being sloped head down to an angle of 15 degrees. The average doses and times are 10 cc. of nupercaine solution (1:1,500) for low, 12 cc. for median and 15 cc. for high spinal anesthesia; twenty, thirty and forty seconds are allowed for the upright position, respectively. As the fluid has to travel 6, 9 and 13 inches, it will be seen that nupercaine in these doses is traveling at the rate of about three seconds to the inch. After three minutes at an angle of 15 degrees the patient is raised 5 degrees and is kept at this slope for the remainder of the operation. The author states that he has employed this method successfully in forty-six cases.

British Journal of Dermatology and Syphilis, London

46: 53-112 (Feb.) 1934

Dermatomyositis and Poikilodermia. J. T. Ingram and M. J. Stewart.—p. 53.
*Treatment of Lupus Erythematosus with "Sanocrysin." J. L. Franklin.—p. 66.

Treatment of Lupus Erythematosus with Gold Compound.—Franklin used double thiosulphate of sodium and gold ("Sanocrysin") in treating thirty-one cases of lupus erythematosus. Of these patients twenty were cured, four were improved and seven were resistant to treatment. These results compare favorably with those of other workers. The best results were obtained in those patients who had had the disease for the shortest time. Of the twenty-three patients who had been affected for five years and less eighteen were cured, whereas of the remaining eight patients who had been affected for more than five years only three were cured and three improved. The results also show that the superficial type of the disease is more amenable to treatment with gold salts than the "fixed" type. Fourteen patients having the superficial type of lupus erythematosus were treated, twelve were cured, one was improved and one was intolerant to the drug but was subsequently cured with another gold compound. Of the seventeen patients with the fixed type of the disease treated eight were cured, three were improved and six did not respond to treatment. The patients who have been cured clinically have been kept under observation for varying periods of time up to two and a half years and, although the authors believe that it is too soon to make a statement as to the permanence of the cures, there is every reason to believe that those patients who have been healed and who have received thorough treatment will remain cured, particularly those who were affected with the superficial type of the disease. Should relapses occur, however, these patients can usually be given further courses of treatment with the drug. This occurred in one patient who relapsed one year after the end of her first course of treatment and was completely healed after the first three injections of another course of treatment. The first dose should be a small one in case intolerance is exhibited, and only exceptionally should a dose of 0.25 Gm. be exceeded.

British Journal of Ophthalmology, London

18: 65-128 (Feb.) 1934

Data Concerning Radiation and Protective Glasses: Note on Retinoscopes. A. Rugg-Gunn.—p. 65.
Transparent Protractor for Scotometers. J. Foster.—p. 98.
Extensive Oculopalpebral Neoplasm; Excision of Lids and Enucleation of Eyeball, Followed by Occlusion of the Orbit. Elena Puscariu.—p. 101.

British Medical Journal, London

1: 179-224 (Feb. 3) 1934

Some Practical Points in Treatment of Pulmonary Tuberculosis by Artificial Pneumothorax. A. L. Punch.—p. 179.
Effect of Fluid Complicating Artificial Pneumothorax. R. R. Trail.—p. 183.
Chronic Appendicitis. W. M. Dickson.—p. 184.
*Anaphylactic Basis of Rheumatism. C. E. Jenkins.—p. 186.
Thrombosis, Embolism and Their Treatment. G. Bankoff.—p. 189.
Torsion of the Normal Fallopian Tube. A. McEachern.—p. 190.

Anaphylactic Basis of Rheumatism.—Jenkins points out that the parallelism that exists between the syndromes of the two diseases anaphylaxis and rheumatism and between the drugs used in their treatment are, when itemized, far too numerous to be dismissed as a series of coincidences. There being no other theory that will account for all the phenomena of rheumatism and its treatment, he submits that the anaphylactic explanation must be accepted as the only alternative to a position that is no more than a contradictory muddle of mysteries.

Indian Journal of Medical Research, Calcutta

21: 467-660 (Jan.) 1934. Partial Index

Comparative Biochemical Findings in Blood of Normal and Malaria-Infected Monkeys. R. C. Wats and B. M. Das Gupta.—p. 475.
Electrocardiograms: Part I. Blood Pressure and Electrocardiographic Changes with Muscle Extract. R. N. Chopra, S. G. Chaudhury and J. C. Gupta.—p. 483.
Preliminary Note on Pharmacologic Action of Antiaris Toxicaria. R. N. Chopra and P. De.—p. 513.
Biologic and Colorimetric Assay of Vitamin A in Some Indian Fresh-Water Fish Oils. N. C. Datta and B. N. Banerjee.—p. 535.
Some Experimental Studies on Leprosy. R. Row, N. P. Dalal and G. V. Gollerkeri.—p. 545.
Effect of a Mammalian Infection in Increasing Susceptibility to Leishmania Infection in Monkeys. L. E. Napier, R. O. A. Smith and K. V. Krishnan.—p. 553.
Effects of Insulin on Contractions of Intestinal Muscle. S. Prasad.—p. 563.
Photodynamic Action of Methylene Blue on Fixed Rabies Virus. H. E. Shortt and A. G. Brooks.—p. 581.
*Morphologic Studies on Rabies: Part I. Salivary Glands. H. E. Shortt and B. N. Lahiri.—p. 587.
Some Observations on Cardiovascular Action of Urea Stibamine. J. C. David, N. Rajamanikam and R. Krishnaswamy.—p. 617.
*Study on Parasites of Kala-Azar and Their Distribution in the Body. M. N. De.—p. 627.
Contributions to Protozoal Immunity: Part II. Immunity to Malaria in Monkeys and Effect of Splenectomy on It. K. V. Krishnan, R. O. A. Smith and C. Lal.—p. 639.

Morphologic Studies on Rabies.—The prolonged study of a large amount of rabic material of Shortt and Lahiri, including dog, monkey and man, has revealed that, while characteristic appearances are found in the salivary glands of rabid animals, these are in most cases the results of an exaggerated physiologic response of the glands to hyperstimulation and do not necessitate the specific presence of a living virus, although this is probably the cause of the stimulation in rabies. No evidence was obtained of the visible presence of any bodies that could be identified as bacteria, protozoa or filtrable viruses or, indeed, of any living causative agent.

Study on Parasites of Kala-Azar.—De describes the different technical methods for the demonstration of the parasites in kala-azar and other leishmania infections and discusses their relative values. The parasites are always found in large

numbers in the liver, spleen and bone marrow and only occasionally in the other parts of the body. The parasites do not remain as freely circulating bodies but are always inside large swollen phagocytic mononuclear cells, the reticulo-endothelial cells of Aschoff or the clasmatocytes of Ranvier. The author could not verify the presence of parasites inside the vascular endothelium and he does not see why it should show power of phagocytosis, in view of the fact that vascular endothelium is considered to be a highly specialized tissue, very well differentiated functionally. When parasites are present in areas other than the liver, spleen and bone marrow there is usually an inflammatory reaction excited by some cause. The relationship of inflammatory reaction to the infection of the reticulo-endothelial cells by leishmania has been discussed.

International Journal of Psycho-Analysis, London

13: 1-116 (Jan.) 1934

Bodily Pain and Mental Pain. E. Weiss.—p. 1.
Folie à Deux. C. P. Oberndorf.—p. 14.
Mona Lisa and Feminine Beauty: Study in Bisexuality. F. Wittels. —p. 25.
Treatment of Bewitchment in a Puritan Community. M. Middlemore. —p. 41.
Early Infantile Sexuality of Man as Compared with Sexual Maturity of Other Mammals. M. Levy-Suhl.—p. 59.

Journal of State Medicine, London

42: 1-62 (Jan.) 1934

The Harben Lectures, 1933: Modern Views of Vitamins and Their Functions: I. Recent Studies of Chemistry of Vitamins. J. C. Drummond.—p. 3.
Id.: II. Physiologic Function of Vitamins. J. C. Drummond.—p. 20.
Id.: III. Vitamins in Relation to Practical Problems of Human Nutrition. J. C. Drummond.—p. 31.
Sea Breezes as a Climatic Factor. E. G. Bilham.—p. 40.
Pollution of Air by Smoke. J. S. Owens.—p. 51.

Medical Journal of Australia, Sydney

1: 81-110 (Jan. 20) 1934

Calcium and Phosphorus Metabolism in Diseases of Thyroparathyroid Apparatus: Part II. Problem of Mode of Action of Vitamin D. F. S. Hansman.—p. 81.
Rest and Movement. Fay Maclure.—p. 95.
Site Predisposition to Cancer. R. D. Wright.—p. 99.

1: 111-146 (Jan. 27) 1934

Review of Mastoid Surgery. W. J. Denehy.—p. 116.
Aphasia. J. M. Gill.—p. 122.

Quarterly Journal of Medicine, Oxford

3: 1-136 (Jan.) 1934

Rhythm of Paroxysmal Tachycardia: Electrocardiographic Study. A. U. Mackinnon.—p. 1.
*Evulsion of Phrenic Nerve in Treatment of Pulmonary Tuberculosis. B. W. Anderson.—p. 15.
Basophil Adenoma of Pituitary Gland. J. Craig and B. Cran.—p. 57.
Blood Urea Clearance Before and After Giving Urea. P. S. Fowweather.—p. 63.
Further Note on Plasma Cholesterol in Nephritis. J. Maxwell.—p. 79.
*Clinical and Biochemical Observations on Hunger Osteopathy, Juvenile and Late Rickets (Osteomalacia). A. M. Crawford and D. P. Cuthbertson.—p. 87.
*Prevention and Treatment of Individual Attacks of Angina Pectoris (Angina of Effort). W. Evans and C. Hoyle.—p. 105.

Evulsion of Phrenic Nerve in Treatment of Tuberculosis.—Anderson performed phrenic evulsion in fifty-one cases of pulmonary tuberculosis and discusses its indications and results when performed as a preliminary to thoracoplasty in conjunction with artificial pneumothorax and as a sole operative procedure. Twenty-three of his patients when last heard of were alive and well, eleven others were alive, but the outlook in these was still doubtful; sixteen were dead and one was dying. If the series is viewed from the point of view as to whether or not the indication for operation was fulfilled, it is seen that in thirty-six instances the indication was definitely fulfilled, in four it was doubtfully fulfilled and in eleven not at all. When no definite indication for operation existed, no change took place. Phrenic evulsion, whether used as a sole operative procedure or in conjunction with other methods of pulmonary collapse, has a somewhat limited, but still definite and valuable, place in the treatment of pulmonary tuberculosis.

Hunger Osteopathy, Juvenile and Late Rickets.—Crawford and Cuthbertson present data derived from a clinical and biochemical investigation of a case of hunger osteopathy, and corresponding observations in cases of juvenile and late rickets (osteomalacia). The essential difference between the metabolism of the case of hunger osteopathy and the rachitic conditions lay in the fact that the former rapidly stored calcium, phosphorus and magnesium without the addition of viosterol, increased intake of mineral matter leading to increased retention, while on the other hand the rachitic cases only showed retention of mineral matter when viosterol was added to the diets. The authors consider that hunger osteopathy and late rickets (osteomalacia) are not necessarily identical in their nutritional origin, but that late rickets (osteomalacia) is a form of hunger osteopathy; namely, that due to deficient vitamin D.

Treatment of Angina Pectoris.—Evans and Hoyle observed 122 patients with angina pectoris (angina of effort) over a period of three years with especial reference to the comparative value of vasodilator drugs for the immediate treatment and prevention of attacks. Syphilis was present in twenty-five cases. Coronary thrombosis was considered only a complication. The comparative results show that glyceryl trinitrate in tablet form when absorbed from the mouth is by far the most effective agent for relieving attacks and for their immediate prevention. Of the 122 patients, 86 per cent obtained great relief and a further 11 per cent moderate relief. Other preparations of glyceryl trinitrate and other remedies tried did not give such good results. Glyceryl trinitrate tablets do not cause objectionable symptoms. Amyl nitrite proved to be disappointing for the relief of attacks, and it can be recommended only for those rare cases in which glyceryl trinitrate fails. It has the further disadvantage of being useless for the prevention of attacks. The use of glyceryl trinitrate tablets immediately before expected anginal attacks is a safe means of preventing pain and should be used far more widely in routine treatment than it is at present. Of the authors' patients 84.5 per cent obtained great benefit, and a further 12.5 per cent obtained moderate benefit by using the drug in this way. This is a greater measure of improvement than was found when any of the other remedies were tried. Most patients preferred to take the drug at their own discretion, and this method of administration proved more effective than when it was taken at short fixed intervals, except for those patients who could not predict attacks with certainty. No harmful effects were encountered from such treatment, though patients used the drug freely for upward of two to three years, and often this enabled them to take more physical exertion and lead a fuller life than had previously been possible.

South African Medical Journal, Cape Town

8: 41-76 (Jan. 27) 1934

Rotylon as an Anthelmintic. W. L. Gopsill.—p. 43.
Duodenal Diverticula. S. N. Sennett.—p. 45.
A Few Unusual Cases. H. Lewis.—p. 47.
Interesting Case of Extra-Uterine Pregnancy. G. S. Van Der Merwe. —p. 50.
Spastic Ileus. C. D. Brink.—p. 52.

Quart. Bull., Health Org., League of Nations, Geneva

2: 551-752 (Dec.) 1933

Fourth Analytic Review of Reports from Pasteur Institutes on Results of Antirabies Treatment. A. G. McKendrick.—p. 553.
Suburban Settlements for the Unemployed in Germany. F. Schmidt. —p. 600.
Medical Education and Reform of Medical Studies. E. Burnet.—p. 620.

Japanese Journal of Experimental Medicine, Tokyo

11: 515-650 (Dec. 20) 1933

Influence of Parenteral Introduction of Liver Cell Constituents on the Blood Gas: I. Influence of Liver Cell Constituents on Normal Rabbit Blood Gas. N. Owada.—p. 515.
Id.: II. Influence of Cell Constituents of Other Organs Than the Liver on Normal Rabbit Blood Gas. N. Owada.—p. 535.
Relation Between Hemolysis and Electrolytes. H. Moriyama.—p. 571.
Study on Virus of Epidemic Encephalitis in Japan. T. Fujita.—p. 599.
Studies on Mucus Producing Bacteria: III. Mutant Forms of Paratyphus B Bacillus Producing Mucus. S. Yasuda.—p. 619.
Studies on Tularemia Bacillus: I. Its Filtrability. M. Kudo.—p. 633.

Annales de Médecine, Paris

35: 81-160 (Feb.) 1934

Basal Metabolism in Man According to Latest Investigations. F. G. Benedict.—p. 81.
*Rôle of Neurovegetative System and Endocrine Glands in Normal and Pathologic Mammary Function. G. Roussy and M. Mosinger.—p. 108.
Gouty Arteritis. L. Mathieu, L. Collesson and R. Cholnus.—p. 124.
*Pneumothorax and Variation of Altitude: Physiopathologic Studies. C. Trocmé.—p. 138.

Neurovegetative System and Endocrine Glands in Mammary Function.—Roussy and Mosinger reviewed the rôle of the neurovegetative system and the endocrine glands in mammary function. They studied five patients showing a unilateral or predominantly unilateral, mammary hyperplasia. In three of these there was marked tenderness to pressure at the point of emergence of the second and third perforating branches. The authors state that the mammary function depends on both the nervous system and the endocrine glands, which often exert a correlated action. Treatment of pathologic galactorrhea is not on an established basis, but they suggest that resection of the fourth intercostal nerve or its perforating branch might give good results.

Pneumothorax and Variation of Altitude.—Trocmé analyzes the factors involved in changes of altitude on pneumothorax. He believes that they can be expressed in physical formulas and made accessible to calculation. The gaseous pocket of an artificial pneumothorax tends to dilate at increased altitudes by a volume expressed as $\Delta V_M = V\lambda$. V is the initial volume of the pneumothorax and λ a factor dependent solely on the barometric conditions at the points of departure and arrival. Each pneumothorax patient withstands the dilatation differently and exactly as it withstands slow insufflation of the pleura with a like volume ΔV_M. The tension of the pneumothorax is expressed $\Delta t = \frac{\Delta V_M}{\mu}$ where μ is a factor peculiar to each pneumothorax which shows the usual conditions of capacity and elasticity. The test of the ascension gives a means of calculating the volume of a pneumothorax by the formula $V = \Delta t \times \frac{\mu}{\lambda}$. These facts apply to all closed pliant cavities, such as the ear, stomach, and intestine. They thus assume the rôle of aneroid barometer to the variations in external pressure.

Gynécologie et Obstétrique, Paris

29: 97-192 (Feb.) 1934

Study of Anatomic Effects of Diathermocoagulation on Chronic Cervical Metritis. J. Chassen and E. Casalta.—p. 97.
Pelvic Congestion: Its Etiopathogenesis and Treatment. C. A. Castaño.—p. 104.
*Rôle of Trichomonas Vaginalis in Gynecology. N. Kissling.—p. 116.
Treatment of Postpartum and Postabortive Infections with Serum of Umbilical Cord. S. Raphalkes and A. Koroleva.—p. 146.
Treatment of Cerebromeningeal Hemorrhages of the New-Born. H. Sloboziano.—p. 160.

Rôle of Trichomonas Vaginalis in Gynecology.—Kissling states that the incidence of leukorrhea and vaginitis due to Trichomonas is high. The presence of Trichomonas may be tolerated without producing any symptom. The existence of Trichomonas is often combined with a vaginitis presenting characteristics and a reaction so specific to treatment that its pathogenic rôle would never be denied, all the more as its disappearance coincides with cure. The frequency of leukorrhea due to Trichomonas is lowered according to age. It attains its maximum between 18 and 35 years of age. The author studied 260 cases of abnormally profuse menstruation, 96 of which presented Trichomonas. He found that the usual treatment of leukorrhea by means of vaginal injections of potassium permanganate and of chlorine compounds has no effect. The author cites as the treatment of choice intravaginal administration of pills of chiniofon, followed by ovules of borated glycerin at 5 per cent. This treatment leads to a rapid disappearance of Trichomonas and of the inflammatory symptoms; it is necessary, however, before interrupting treatment to make sure that Trichomonas has definitely disappeared. Relapses after menstruation become constantly less serious, provided treatment is kept up. The relapses are probably due to encysted forms, inaccessible to treatment. In only one case did the author find Trichomonas free from other associations. Most of the time it is found associated with a rich flora of cocci. Many authors report its association with the gonococcus and the author presents two such cases. Like all associations into which the gonococcus enters, this is of short duration. The presence of these parasites may be easily established by Gram's method, gentian violet or Loeffler's methylene blue.

Presse Médicale, Paris

42: 329-344 (Feb. 28) 1934

Complete Latent Fractures of Neck of Femur in Adults. A. Mouchet and Alain Mouchet.—p. 329.
*New Management of General Anesthesia: Basal Anesthesia by Intravenous Injection of Paraldehyde with Dextrose. I.-I. Nitzescu and J. Iacobovici.—p. 331.
Value of Roentgenologic Examination of Cancer of Colon. G. Maingot and R. Sarasin.—p. 333.

New Management of General Anesthesia.—Nitzescu and Iacobovici report favorably on the use of a basal anesthetic consisting of paraldehyde with dextrose. An isotonic solution of dextrose is prepared (56.6 Gm. to the liter). A small amount of this solution is poured into a serum apparatus of from 250 to 300 cc. capacity. From 15 to 20 cc. of paraldehyde is added with a pipet or sterilized graduate in the proportion of from 6 or 8 cc. to 100 cc. of dextrose solution. The solution mixes easily on shaking. The solution is injected in the proportion of from 0.15 to 0.21 cc. of paraldehyde per kilogram of body weight and at a rate of about 15 or 20 cc. a minute. The authors used this method of basal anesthesia in eighty-two patients with good results. The initial irritative stage of induction of general anesthesia was much improved, as was the waking stage. The principal disadvantage of basal anesthesia lies in the inability to remove or alter its effects once the anesthetic is introduced. With paraldehyde prepared in this way the authors feel that the low toxicity and wide margin of safety do much to obviate even this difficulty.

Schweizerische medizinische Wochenschrift, Basel

64: 201-240 (March 10) 1934

*Vesical Ectopy. Monnier.—p. 202.
*Serologic Maturation Processes and Latent Immunity. Hanna Hirszfeld and L. Hirszfeld.—p. 203.
Use of a Modified Protein-Cream-Milk According to Feer in Nutrition of Infants. A. Frank.—p. 205.
*Relations of Otitis Media to Diarrheal Disorders During Childhood. H. Brokman.—p. 208.
Partial Spontaneous Pneumothorax in the New-Born. A. Hotz.—p. 209.
Scarlet Fever Prophylaxis. W. Hoffmann.—p. 211.
Suggestions for Construction of Children's Sanatorium. Bossard.—p. 212.
Observations on Measles in Home Practice. P. Ryhiner.—p. 212.
Progeria, Dwarfism of Senile Type. E. Schiff.—p. 213.
Diagnosis and Therapy of Hydrocephalic and Related Conditions. G. Fanconi.—p. 214.
Child, Aged 2 Years, Poisoned by Cleansing Fluid Containing Large Amounts of Monochlorobenzene. H. Reich.—p. 223.
Clinical Aspects of Glandular Fever. O. Korgel.—p. 224.
Alcaligenes Abortus Infection During Childhood: Case. E. Ziegler.—p. 225.
Expense of Nutrition of Nurslings. R. Rehsteiner.—p. 226.
*Painful Paralysis of Young Children (Perannular Radial Subluxation). W. Feer.—p. 228.
*Early Persisting Spontaneous Pneumothorax During Nursling Age. H. Willi.—p. 229.
Congenital Tuberculosis: Two Cases. H. Sulzer.—p. 233.
Myelitis Following Mumps and Measles. C. Koussmine.—p. 235.
Epidemic of Measles in Scarlet Fever Ward in Children's Hospital in Zurich. Ruth Uehlinger-Frauchiger.—p. 237.

Vesical Ectopy.—In twenty-five years, Monnier treated nine cases of vesical ectopy. He reviews therapeutic methods that have been recommended and reaches the conclusion that the Coffey-Mayo method is the best. In this procedure the ureters are severed before their entrance into the bladder, the peripheral section is closed by a ligature and the oral portion is transplanted obliquely into the sigmoid. An ascending infection is prevented if implantation is done in such a manner that from 4 to 5 cm. of the ureter passes between the mucosa and the musculature. Thus the intra-intestinal pressure closes the implanted section so that backflow is impossible. Another advantage of the operation is that the technic is so simple that it can be performed on young children. Eventually it can be done in two stages. A complication developing in one of the cases, in which the author employed the Coffey-Mayo method, convinced him that the following factors should be given attention: 1. The ureters should be mobilized only as far as it is

absolutely necessary, so as not to impair their nutrition. 2. The preparatory treatment of the intestine should be taken care of. 3. In order to secure an aseptic implantation, the technical suggestions of Coffey should be followed; that is during the operation the inside of the intestine should be treated with irrigations and tamponade and the anastomosis should be done with closed mucous membrane and with a suture, which, after it has been cast off, will establish a connection between intestine and ureter.

Serologic Maturation Processes and Latent Immunity.—The Hirszfelds point out that the irregular susceptibility of various races for pathogenic micro-organisms and observations on families and on twins indicate that the constitution plays a part in infectious diseases. However, because of the multiplicity of internal and external factors it is difficult to recognize the constitutional principle. In the Schick test for diphtheria, the Brokman test for dysentery and the Dick test for scarlet fever, the negative skin reaction is generally ascribed to the presence of antitoxins, but the authors point out that the predisposition of the tissues must be given consideration. They assume that there are forms of immunity, which can be traced to a deficiency in the reaction capacity. With the aid of the skin reactions, racial differences have been demonstrated in the susceptibility for diphtheria and scarlet fever. Other investigations demonstrated an increase in the antitoxin carriers with advancing age. The problem is whether this increase is due to a spontaneous development of the antibodies or to latent immunity. The authors investigated several cutaneous reactions. They reach the conclusion that the development of epidemics is largely dependent on the number of susceptible persons. In case of high virulence of the pathogenic micro-organism, the constitutional factors are of minor significance, but, if prolonged contact of the pathogenic micro-organism and the macro-organism has produced a mutual habituation, the constitutional differences in susceptibility play an important part.

Otitis Media and Diarrhea in Children.—Clinical analysis of the acute diarrheas in more than 100 children by Brokman showed that the principal symptoms were otitis media, diarrhea, disturbances in the intermediate metabolism and disturbances of the central nervous system. Pathologic, bacteriologic and serologic investigations corroborated the clinical unitarian theory. A number of disease entities, which so far were considered otogenous sepsis, atypical alimentary intoxication or atypical dysentery, have become a unit. The primary etiology is still unknown and the pathogenesis has been cleared only partly, but this point of view is an attempt to form a new clinical, therapeutic and epidemiologic foundation for these serious disturbances occurring in small children.

Painful Paralysis of Arm of Young Children.—Feer describes a painful paralysis of the arm, which develops in small children after slight traumas. The condition occurs comparatively often, but as a rule only in children less than 5 years of age. The trauma that causes the condition often develops in the following manner: A child is led by the hand and stumbles, but in order to avert a fall, the person leading the child pulls the arm. The child cries and the arm hangs limp as if paralyzed. Touching of the arm and attempts at movement are painful. It has been determined on the cadavers of children that by a jerking pull on the hand the arm can be brought into a position similar to this form of painful paralysis. In this condition the head of the radius has slipped partly out of the annular ligament and the ligament is incarcerated between the radius and the humerus. This explains the great painfulness of all movements in the elbow joint. On the cadaver, the adjustment of the head of the radius and of the annular ligament could be accomplished by supination and flexion of the forearm. The condition has been designated as perannular radial subluxation or as subluxation of the radius by elongation. It is identical with the so-called painful paralysis of young children.

Spontaneous Pneumothorax in Nuralings.—Willi relates the clinical histories of three nurslings with spontaneous pneumothorax. All three showed a good general development in spite of the early appearance and persistence of the pneumothorax. The most important clinical symptoms are dyspnea, contraction of the thorax and displacement of the heart. Typical changes in the physical aspects of the lung do not become manifest until later. Roentgenoscopy reveals lesser density on the side of the pneumothorax and displacement of the heart and the mediastinum toward the opposite side, the yieldingness of the so-called weak site being especially pronounced. In case of a left-sided pneumothorax, a massive collapse of the right upper lobe becomes manifest. The diagnosis is made more difficult by faint pulmonary outlines in the regions of lesser density and by the indistinct margins of the collapsed lung. Puncture and the determination of the pressure are of great significance for the diagnosis. Measurements of the pressure in the described cases indicated that the assumption of a hyperpressure of a tension pneumothorax was not justified. In one of the cases the measurements revealed a negative intrathoracic pressure, but in spite of this there was an enormous displacement of the heart and of the mediastinum. This seems to indicate that merely a pressure difference between the two halves of the thorax is sufficient to produce a great displacement of the mediastinum. In the differential diagnosis, massive pulmonary collapse, atelectatic pneumonia, cystic and honeycombed lung and hypoplasia of the lung have to be considered. The prognosis is doubtful because of the danger of chronic bronchitis and of bronchiectasis. Treatment does not promise great results, for conservative measures do not counteract the pneumothorax and punctures produce only temporary results. If the child shows a fairly good development, the parents are usually reluctant to give their consent to an intervention. The author considers a congenital pulmonary defect the probable cause of the spontaneous pneumothorax in children.

Policlinico, Rome

41: 121-184 (March 1) 1934. Medical Section

Research on Nephropathies: Value and Significance of Polypeptidemia in some Groups of Nephritis. C. Manzini.—p. 121.
*Reaction of Takata-Ara in Serum and Ascitic Fluid of Diseases of Liver. G. Lazzaro.—p. 144.
Experimental Research on Hypoglycemic Action of Bile. D. Beggi and V. Picasso.—p. 152.
Pneumothorax Treatment of Pulmonary Gangrene. G. Dalla Torre.—p. 157.

Modification of Takata-Ara Test.—Lazzaro performed Jezler's modification of the Takata-Ara test in 200 cases. Nine small tubes are prepared and 1 cc. of the 0.9 per cent physiologic solution of sodium chloride is placed in each tube. To the first tube is added 1 cc. of the liquid to be examined (serum or ascitic fluid); 1 cc. of this mixture is pipetted off and added to the second tube. The same procedure is repeated in the other tubes until there is a series of dilutions of from 1:2 to 1:512. To each tube is added 0.25 cc. of a 10 per cent solution of sodium carbonate and 0.3 cc. of the reagent of Takata, which is prepared at the moment of use by mixing equal parts of a 0.5 per cent solution of corrosive mercuric chloride and a 0.2 per cent aqueous solution of fuchsin. The tubes are kept at room temperature and corked. After six and twenty-four hours, respectively, the reaction is determined. The reaction is positive in serum if there is a flocculation in at least three tubes and if the first flocculation is observed in a dilution of 1:32 or in a higher dilution. The reaction is positive in the ascitic fluid if the first flocculation appears in a dilution of 1:8 or higher. The reaction is weakly positive if the flocculation shows in a dilution of 1:32 or 1:8 in two tubes, and if it is scarcely evident in the third tube from either end. In twenty normal persons the reaction was constantly negative; it was negative in sixty patients presenting pernicious anemia, hemolytic icterus, gastric and duodenal ulcer, leukemic myelosis, diabetes mellitus, typhoid, malaria, exudative pneumonia, pulmonary tuberculosis, cardiac diseases and croupal pleurisy. Of twenty-nine cases of cirrhosis of the liver, twenty-four showed a positive, four a weakly positive and one a negative reaction. In two cases of severe catarrhal icterus the reaction was positive during the acute period of the disease and became negative during convalescence. In cases evincing a positive reaction the increased globulin content was lower than 1. The inversion of the increased globulin content does not necessarily determine the possible outcome of the reaction, as many diseases show inversion of the content and a negative reaction.

Archiv für klinische Chirurgie, Berlin

179: 1-210 (Feb. 22) 1934

Symptomatology and Treatment of Ureteral Papilloma. W. Sinnreich. —p. 1.
*Nicotine in Etiology and Postoperative Management of Ulcer Disease. R. Friedrich.—p. 9.
Osteosynthesis of Fractures of Middle of Neck of Femur. F. Felsenreich.—p. 29.
Electrocoagulation Through Subcutaneous Puncture. W. Förschler.—p. 53.
*Nonspecific Inflammatory Reactivity in Surgical Disorders and Surgical Interventions. K. Ehhardt.—p. 71.
Traumatic Lesions of Spinal Roots. T. Mauss.—p. 122.
Contribution to Knowledge of Muscular Trismus of Jaw. K. H. Link. —p. 169.
Fat Embolism of Retina After Trauma. R. Oppolzer.—p. 176.

Nicotine in Ulcer Disease.—Friedrich believes that the rôle of nicotine in the etiology of ulcer disease has been rather underestimated. Ulcer disease, especially the prepyloric ulcer, has been on the increase since the war. This increase has been predominantly in men. There has likewise been a steady increase in the consumption of tobacco. The author investigated 153 men who were operated on for ulcer disease and found that 79.7 per cent of them were pronounced smokers, averaging from twenty to thirty cigarets a day. Studies of the effect of nicotine on the tonus of the splanchnic vessels and the motility and secretion of the stomach demonstrated that it is capable of altering the normal course of gastric function. The postoperative results were better in persons who smoked but little or not at all before the operation, when contrasted with those who were heavy smokers even after the operation. Nicotine was found to influence the gastric function in the postoperative period as well. In addition to the effect of nicotine swallowed with the saliva and absorbed from the oral mucosa and the mucosa of the respiratory passages, a reflex effect must be taken into consideration. The author believes that irritation of the mucous membrane of the mouth results in a reflex stimulation of gastric secretion. Thus smoking may be compared to sham feedings with the resultant flow of gastric juice which cannot be utilized. The recent studies of Büchner and Moscowicz showed that such gastric juice is dangerous even for the healthy cells. It would appear, therefore, that smoking on an empty stomach is particularly damaging.

Inflammatory Reactivity in Surgical Operations.—Ehhardt points out that the inflammatory reaction of the skin is taken as the measure of defense mechanism of the body. Studies in allergy demonstrated that the skin occupies a prominent position as a general reactive organ. The method of study consisted in applying to the leg a cantharides plaster for twenty-two hours. The contents of the blister resulting from the cantharides irritation were then studied as to the cellular content. The response to cantharides irritation on the part of the skin is regarded as a mobilization of the reticulo-endothelial cells of the skin. In observations made on uncomplicated appendectomies in the surgical clinic of the University of Greifswald, the author noted that the first stage of the cantharides exudate presented a suppurative character and was regularly followed by a transition to a lymphohistiocytic type of cells. Eosinophils did not appear earlier than the sixth postoperative day. A postoperative rise in cells was noted in practically all cases. In appendicitis of longer duration, several days, the increase in the number of cells may fail to take place and transition to the lymphohistiocytic type may be delayed, and the eosinophils, as a rule, will appear immediately after the operation. The later complications of appendicitis are more clearly reflected in the inflammatory cell picture than in the temperature curve or the blood picture. A return to the suppurative reaction takes place. The course in conservatively treated perforative appendicitis was characterized by a suppurative reaction in the febrile state which, in the course of encapsulation and absorption of the pus, gradually shifted to the lymphohistiocytic phase. The study of various subacute chronic infections showed a constant increase in lymphohistiocytes, with a tendency to fluctuations as pronounced as from 10 to 70 per cent. The conclusion was drawn that the more the mesenchyma participated in the defense mechanism the stronger was the histiocytic reaction in the rest of the organism and also in the skin. The author thinks that the occasional remarkable effect of an exploratory operation in tuberculous peritonitis may be ascribed to the stimulation of the reticulo-endothelial system. Stimuli and irritants influence the cantharides exudate by mobilizing the histiocytes and the eosinophils. The effect of an operation or of injury on a normal organism is one of an unspecific irritant and is followed by a typical reaction in two phases, the leukocytic combative and the lymphohistiocytic convalescent phases. The author concludes that repeated studies in the course of a surgical disturbance of the cantharides exudate offer a valuable biologic method of estimating the cellular defense mechanism.

Dermatologische Zeitschrift, Berlin

68: 241-304 (Feb.) 1934

*Epidermophytides and Epidermophytin. A. E. Ruete and Ursula Scholz. —p. 241.
Verruca Peruviana (Carrion's Disease): Case. W. Frohn.—p. 245.
Gonorrheal Lymphangitides Originating in Distant Metastases: Problem of Rarity. C. Carrié.—p. 252.
*Experimental Herpetic Folliculitis: Percutaneous Inoculation with Herpes and Problem of Natural Tissue Infection. H. Hruszek.—p. 258.

Epidermophytides and Epidermophytin.—The development of epidermophytides and the positive outcome of the intradermal epidermophytin reaction are cited by Ruete and Scholz as proof that epidermophytosis is not merely a superficial disturbance. They found that vaccination with epidermophytin (filtrate from epidermophyton cultures) gave positive results in 100 per cent of the patients with epidermophytosis. Moreover, the reaction seems to be specific for epidermophytosis, for it was negative in a form of trichophyton infection and in pityriasis versicolor. However, further tests will be necessary to demonstrate the specificity definitely. The experiences with the immunoreaction induced the authors to try the therapeutic application of epidermophytin. They treated fifteen patients by means of epidermophytin wheals and effected prompt cures. The injections are not painful. With the exception of a slight itching, they produce no undesirable sensations and no fever. The authors cite case reports, which indicate that the injections hasten the frequently prolonged course of the disorder and that in combination with iodine and a sulphonated bitumen powder they may replace the unpleasant treatment with ointments.

Experimental Herpetic Folliculitis.—Hruszek shows that the manifestations which have been traced to the herpes virus are manifold. As the port of entry of the herpes virus and the mechanism of its first infection has not been fully explained as yet, the author made studies with percutaneous inoculation. Inoculation of human skin was accomplished by rubbing it with human herpes material. A typical herpetic folliculitis developed. The herpetic nature of the folliculitis was demonstrated on the cornea of rabbits and in further human passages by means of scarification. The further development of the herpes that was produced by rubbing herpes material into the skin and its tendency to successive crops and to relapses were identical with those of the herpes that had been produced by scarification. The author thinks that there are perhaps other forms of simple herpes, in which a herpetic etiology has not been thought of. He mentions particularly follicular dermatoses (according to Naegeli some cases of "nonparasitic" sycosis) that do not necessarily have to present a vesicular monomorphic picture but may appear also as papules, urticarial efflorescences and pustules.

Jahrbuch für Kinderheilkunde, Berlin

142: 1-68 (Feb.) 1934

*Acetonemic Convulsions During Childhood: Significance of Hypoglycemia. G. Fanconi.—p. 1.
Postvaccinal Disturbances. W. Blacher.—p. 26.
Second Attacks and Relapses in Acute Infectious Diseases of Childhood. H. Zischinsky.—p. 43.

Acetonemic Convulsions During Childhood: Significance of Hypoglycemia.—Fanconi describes seven cases of acetonemic convulsions. Gastro-intestinal disturbances, particularly lack of appetite and vomiting, preceded the attacks by at least several hours. Diarrhea was absent in some cases and constipation existed. The convulsions were preceded by an aura. The first attack, lasting several minutes, did not complete the picture, but an epileptic state developed, and between

the attacks the children were either in a coma or were somnolent and apathic. The condition differs from true epilepsy in the rapid succession of the attacks and in the prolonged stupor, and, whereas true epileptic attacks generally develop during the night or on awakening, these acetonemic convulsions developed during the day. The temperature was increased during the convulsions. The urine contained acetone and acetic acid, but the sugar test was negative. The cerebrospinal fluid was normal, with the exception of the increased sugar content that characterizes all convulsive states. Examination of the blood revealed unusually low sugar values during the coma and the convulsions, in spite of the fact that the patient had received sugar either by mouth or parenterally. After several days the blood sugar returned to normal. In dextrose tolerance tests that were performed immediately after the cessation of the convulsion the blood sugar increased hardly at all, but the subsequent decrease to normal or subnormal values was extraordinarily pronounced. Tolerance tests that were made later gave mostly normal results. The author concludes that in the carbohydrate hunger that develops following gastrointestinal disturbances the normal child protects itself against hypoglycemia and its sequels (convulsions and so on) by limiting the insulin production. The child with acetonemic convulsions fails to do this, and in this deficient regulation of the insular apparatus the author sees the cause of spasmophilia. He recommends an easily digestible diet with high carbohydrate but low fat and protein content. During the coma, dextrose should be administered. If a child has had an attack of acetonemic convulsions, the parents should see to it that it never fasts for longer periods, and even during diarrhea and fever the child should be given sufficient amounts of sugared tea and fruit juices.

Medizinische Klinik, Berlin

30: 253-288 (Feb. 23) 1934

Pathogenesis and Therapy of Hay Fever. E. Urbach.—p. 253.
Speech Disturbances and Heredity. H. Gutzmann.—p. 256.
*Do Neutralization and Flocculation Speeds of Diphtheria Serums Exert an Influence on Therapeutic Action? W. Kolle and R. Prigge.—p. 258.
Aspects of So-Called Noduli Cutanei. W. Frieboes.—p. 260.
Preparatory Treatment in Operations on Account of Closure of Choledochus. E. Seifert.—p. 261.
*Disturbances in Vascularization Simulating Leukoderma. F. Dietel.—p. 262.
Occurrence of Macrocytic Anemia in Carcinoma of Stomach. H. E. Bock.—p. 263.
Endocarditis Lenta with Aortic Embolism: Case. E. Hasenjäger.—p. 266.
Value of Kaufmann's Water Test in Functional Examination of Heart. O. Zimmermann.—p. 267.
Observation on Kinetocytes in Dark Field. A. Neumann.—p. 268.
Cause of Multiple Sclerosis. G. Steiner.—p. 269.
Dietary Treatment in Gynecology and Obstetrics. A. Bauer.—p. 271.

Therapeutic Action of Diphtheria Serums.—The failure of diphtheria antitoxin in certain cases has been ascribed to different causes. The theory has been advanced that the rapidly flocculating serums and those which in the test tube neutralize toxins rapidly have a greater therapeutic value. Kolle and Prigge decided to investigate this problem. They reach the conclusion that the acidity (neutralization and flocculation speeds) of the diphtheria serums exerts no noticeable influence on the therapeutic action. They maintain that the results of the serotherapy of diphtheria depend primarily on the time at which the serum is administered. The earlier after the onset of the infection the serum is injected, the better are the prospects for a cure.

Disturbances in Vascularization of Skin Simulating Leukoderma.—Dietel describes peculiar whitish spots that give the impression of circumscribed areas of depigmentation, which occurred more frequently during the cold season. The incidence and the extent of the disorder were greater in women than in men. In many of the patients there existed a tendency to acrocyanosis. The irregularly distributed whitish spots, which vary in size but do not exeed that of a pea, appear as a rule on the backs of the hands and on the forearms. If the arms are stretched upward for a while the spots tend to disappear. Obliteration of the spots can be accomplished also by the production of active hyperemia, for instance by prolonged rubbing, hot baths and so on, but, as soon as the irritation subsides, they reappear. Cold baths produce a bluish red coloration of the skin and an intensification of the spots. It was demonstrated that the whitish spots always reappear at the same site. The author considers them the result of disturbances in the vascularization of the skin. The cause is apparently a vascular spasm in a precapillary arteriole, so that the apparent depigmentation is probably nothing but an ischemic area. To a certain extent the condition is related to cutis marmorata, but it differs from the latter in that the retial patterns are absent. The author thinks that the whitish spots are often the result of slight degrees of freezing. In the majority of cases the condition involves the hands and arms, but one case is described in which the spots appeared on the legs of a girl, aged 15, who had been in the habit of going without stockings. The author suggests the term "pseudleukoderma."

Monatsschrift für Psychiatrie und Neurologie, Berlin

88: 1-120 (Feb.) 1934

Active Immunization Experiments in Neurosyphilis with Apathogenic Spirochaeta Pallida: Ninety-Six Cases. L. Benedek.—p. 1.
Senile Paralysis with Fatal Arteriosclerotic Cerebellar Hemorrhage. M. Liebers.—p. 30.
Disturbances in Position and Their Modifiability: Clinical Examination of Patients with Mobile, Spastic Torticollis. F. Quadfasel and H. Krayenbühl.—p. 39.
*Comparison of Fluids Obtained by Cisternal and Spinal Punctures in Patients with Nervous and Mental Disturbances. F. Kulcsár.—p. 87.
Changes in Cerebrospinal Fluid in Repeated Punctures on Dogs. E. M. Steblow and A. B. Mandelboim.—p. 104.

Cisternal and Spinal Punctures in Mental Disturbances.—To determine whether the examination of the fluid obtained by cisternal puncture gives as valuable diagnostic information as that obtained by spinal puncture, Kulcsár compared the data on the two punctates from 150 patients. He is convinced that in normal cases the differences in the two specimens manifest themselves only in a somewhat higher sugar value of the cisternal fluid and a slightly greater cell count of the spinal (lumbar) fluid. In disorders of the central nervous system the differences are greater and generally show a higher number of cells and a higher globulin content of the spinal fluid, while in the cisternal fluid the Wassermann reaction and the colloidal reactions show a lesser positivity. If this is taken into consideration, the observations on the cisternal fluid will permit conclusions about the changes in the fluid obtained by spinal puncture, and even slight changes in the cisternal fluid can be considered pathologic. In most cases the examination of the cisternal fluid gives just as valuable information as that of the spinal fluid. But it is natural that the fluid which is withdrawn from the region of the pathologic focus shows the severest changes. In disorders of the spinal cord or of the roots, it is logical for the spinal puncture to be done in addition to the cisternal puncture. In nervous and mental disturbances, however, the cistern puncture should be made first, because there is hardly any meningism following it, and the result of the examination of this specimen gives about as much information as does that of the spinal specimen. The spinal puncture should be made only if certain conditions make it necessary.

Ugeskrift for Læger, Copenhagen

96: 215-236 (Feb. 22) 1934

Height and Weight in Children. Monrad.—p. 215.
*Hereditary Anonychia and Onychatrophy. T. Kemp and P. V. Andersen.—p. 215.
Possibility of Preserving Tooth in Follicular Cysts of Jaw. J. Hertz.—p. 217.
Quickest, Easiest and Cheapest Method for Examination of Blood Sugar. Johanne Christiansen.—p. 220.
Coarse Bread. M. Hindhede.—p. 221.
"Carrot Poisoning" (Aurantiasis Cutis Baeltz, Carotenemia): Case. P. Vogt-Møller.—p. 223.

Hereditary Anonychia and Onychatrophy.—Kemp and Andersen say that these conditions occur partly as isolated malformations, partly with other abnormalities, particularly patellar defect, other bone and joint malformations and hair dystrophy. In the family described, nineteen out of thirty-three members in six generations had anonychia or onychatrophy, inherited as a dominant, monomeric characteristic. No other hereditary anomalies appeared in the family.